



2007-2008 CATALOG

ACCREDITATIONS

Accrediting Commission of Career Schools and
Colleges of Technology (ACCSCCT)
American Veterinary Medical Association (AVMA),
Veterinary Technology Program
Joint Review Committee on Education in Radiologic Technology (JRCERT),
Radiologic Technology Program
National Automotive Technicians Education Foundation, Inc. (NATEF),
Automotive Technology Program

APPROVALS

Pennsylvania Department of Education,
State Board of Education
United States Department of Education,
Title IV Assistance
Pennsylvania Higher Education Assistance Agency
(PHEAA)
Office of Vocational Rehabilitation
Veterans Training

REGISTRATIONS

United States Department of Agriculture



www.johnson.edu

3427 NORTH MAIN AVENUE • SCRANTON • PENNSYLVANIA 18508-1495
(570)342-6404 (800)293-9675

About This Catalog

This catalog is a primary reference source for students, faculty, staff, and the community and will answer many, if not all, questions regarding Johnson College.

Johnson College reserves the right, in its sole judgment, to make changes of any nature in its programs, calendar, or academic schedule whenever it is deemed necessary or desirable. Changes may include course content, scheduling of classes, and canceling of classes and other academic activities. The College will make every effort to provide students with timely notification of such changes.

This catalog does not establish a contractual relationship but summarizes current information regarding the calendar, admissions, degree requirements, fees, regulations, and course offerings. The information contained in this catalog is correct at the time of printing. Changes in policy, requirements, and regulations may occur during the year.

Non-discrimination Policy

Johnson College does not discriminate with regard to race, color, creed, sex, age, disability, or ancestry in the administration of its educational and admission policies, scholarship, loan, athletic and other school administered programs, or employment practices in accordance with Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, or any other legally protected category. For information regarding civil rights and grievance procedures, contact the President of Johnson College, 3427 North Main Avenue, Scranton, PA 18508, (570) 342-6404.

Accreditation/Approvals

Johnson College is accredited by the Accrediting Commission of Career Schools and Colleges of Technology (ACCSCT); the Radiologic Technology Program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT); the Automotive Technology Program is accredited by the National Automotive Technicians Education Foundation, Inc. (NATEF) and the Veterinary Technology Program is accredited by the American Veterinary Medical Association (AVMA). The Pennsylvania Department of Education, State Board of Education, has approved Johnson College as a two-year college.

Date of Publication August, 2006

O. S. Johnson Technical Institute t/a Johnson College

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GENERAL INFORMATION

2007-2008 ACADEMIC CALENDAR

Fall Semester 2007

Aug. 23 & 24	Freshman Orientation	Thursday & Friday
Aug. 27	Classes Begin	Monday
Sept. 3	Labor Day, College Closed	Monday
Sept. 19	Activity Day	Wednesday
Oct. 1	Module 1 Ends	Monday
Oct. 2	Module 2 Begins	Tuesday
Oct. 12	Fall Break, No Classes	Friday
Nov. 6	Module 2 Ends	Tuesday
Nov. 6	Last Day for Drop/Add Period	Tuesday
Nov. 7	Module 3 Begins	Wednesday
Nov. 12	Veteran's Day, College Closed	Monday
Nov. 22 & 23	Thanksgiving Recess, College Closed	Thursday & Friday
Dec. 17	Module 3 Ends	Monday
Dec. 18	Christmas Break Begins	Tuesday

Spring Semester 2008

Jan. 7	Classes Begin	Monday
Feb. 8	Module 1 Ends	Friday
Feb. 11	Module 2 Begins	Monday
Feb. 18	President's Day, College Closed	Monday
Mar. 3-7	Spring Recess, No Classes	Monday – Friday
Mar. 21-24	Easter Recess, College Closed	Friday & Monday
Mar. 31	Module 2 Ends	Monday
Mar. 31	Last Day for Drop/Add Period	Monday
Apr. 1	Module 3 Begins	Tuesday
May 5	Module 3 & Semester Ends	Monday
May 9	Commencement Practice	Friday, 9:00 am
May 10	Commencement	Saturday, 10:00 am

History of Johnson College

Johnson College, a two-year technical college, was founded by Orlando S. Johnson, a wealthy coal baron in the Scranton area who died in 1912. Mr. Johnson left the bulk of his estate to establish and maintain a trade school and his purpose became the mission of the College as an institution “*where young men and women can be taught useful arts and trades that may enable them to make an honorable living and become contributing members of society.*”

A board of directors was created and a 65-acre tract in Scranton known as the William H. Richmond estate was selected as the site for the new enterprise. Opening in 1918, the school admitted young men and women who had completed a minimum of eight years of school and were 14 years old.

In 1964, the school became a post-secondary institution requiring applicants to be high school graduates or to have equivalency certificates. The name of the institution was changed from the Johnson Trade School to the Johnson School of Technology in 1966. The school was incorporated as a non-profit corporation in 1967, and in 1968 it was licensed by the Commonwealth of Pennsylvania Bureau of Private Trade Schools. Approval to award a degree of Associate in Specialized Technology came in 1974, with accreditation by the National Association of Trade and Technical Schools (NATTS) following in 1979.

In 1985, the name of the school was changed to Johnson Technical Institute; the three-year Associate in Specialized Technology degree programs were changed to two-year programs in 1987.

Responding to the continuing technological changes in society, the board, administration, faculty, staff and students conducted an intense two-year self-study, beginning in 1994, to assess the institution’s strengths and weaknesses. The study led to a formal application to the Commission on Higher Education for status as a two-year college. The Pennsylvania Department of Education approved the application of Johnson Technical Institute as a two-year college in 1997; the change of name to Johnson College was instituted in 2001.

The graduating class of 1998 was the first class to receive either an Associate in Applied Science (A.A.S.) degree or an Associate in Science (A.S.) degree.

Continuing with the expansion of technology programs, a Veterinary Technology program was introduced in 1994. Clinical classes were held off-campus until the erection of a 6,500 square foot Science Center on campus was completed. The program received full accreditation from the American Veterinary Medical Association (AVMA) for the fall semester of 2000. In January, 2004 the College opened the Animal Care Center as a

teaching facility to enhance the Veterinary Technology educational experience. In 1995, Electrical Construction & Maintenance Technology was added to the curriculum, and the Bureau of Private Licensed Schools approved the Diesel Truck Technology program in November of 1996.

A Computer Information Technology program that specializes in enterprise computer networking was approved by the Commission on Higher Education in 2000, and a curriculum in Radiologic Technology received the Commission's approval for the fall, 2002 semester. The Radiologic Technology program received accreditation by the Joint Review Committee on Education in Radiologic Technology (JRCERT) in May, 2005. The Distribution & Supply Logistics Technology program was approved as a program offering for the fall, 2006 semester.

Today, approximately 400 students pursue degrees in 12 different trade, technical, or clinical programs. The College's eight buildings include a library, bookstore, gymnasium, physical fitness center, classrooms, shops, laboratories, administrative offices and a student apartment complex for on-campus living.

Over the years, Johnson College has served the region by providing programs of technical education and continually evaluates its programs to meet the technology needs of society. This evaluation process is assisted by the Program Advisory Committees of each program area, consisting of regional business and community leaders who meet several times during the year to advise the College on curriculum content, length of programs, and current materials and equipment. They also review placement and retention statistics. The College has maintained the initial intent of Mr. Johnson with a professional and dedicated staff to ensure up-to-date training that prepares graduates to readily step into entry-level positions in business and industry.

The current student body is comprised of approximately 71% males and 29% females. The students spend 60% of their time in technology courses and the remainder in general education classes. The College has an extensive program of internships, cooperative education and practicums with a variety of businesses and professional organizations. One of the important success factors of Johnson College is a consistently high employment rate of students within a short time after graduation.

Today, Johnson College is a valuable resource for the changing technological needs of our society.

Plan of Education

Students come to Johnson College to prepare themselves as entry-level technicians in the business and professional community.

To accomplish this primary objective, students pursue technology courses that amount to approximately 60% of their time at the College. The remaining 40% is spent in general education courses preparing them to advance in their careers. The usual class size is 25 but does not exceed 45 students.

Faculty members bring to each program a combination of professional education and sound, practical experience. The faculty exhibits a personal interest in the progress of all students, encouraging and assisting them to achieve the maximum benefit from their programs of study.

The physical facilities consist of modern classrooms, trade areas, and laboratories that are furnished with tools, machines, equipment, and materials that are required to provide a thorough program of education. Equipment used for training in each program of education is representative of that found in industry and is selected to provide the student with the broadest educational experience possible. Examples of this equipment consist of hand and power tools, specialized testing and repairing apparatus, industrial units and clinical devices. Some departments provide an extension of this exposure by requiring students to participate in a practicum/internship/cooperative educational experience.

Learning opportunities are enhanced through the use of the College library which is kept current with books, periodicals, and brochures and provides students with Internet capability. The Library/Resource Center provides for the gathering of information from a variety of outside services and is a member of the Northeast Pennsylvania Library Consortium. In addition, close contact is maintained with institutional and industrial libraries in the area which provide additional sources of reference information. Further learning comes from the use of educational videos, field trips and presentations by business and industrial consultants.

Careers in technology are constantly changing as a result of new products and developments in material, tools, machinery, equipment, methods and techniques. Program Advisory Committees, comprised of representatives from business and industry, meet regularly with the faculty and administration to make suggestions on course content so that College programs are kept current.

Mission Statement

The mission of Johnson College is to provide a foundation of education and skills necessary for specialized employment, career advancement, and life-long learning.

Degrees Awarded

Johnson College is approved by the Pennsylvania Department of Education and the State Board of Education to award two degrees, the Associate in Science (A.S.) degree and the

Associate in Applied Science (A.A.S.) degree. All the programs of study prepare graduates for entry-level positions in their field of study.

The Associate in Science (A.S.) degree is awarded to students who graduate from the following programs:

- Computer Information Technology
- Radiologic Technology
- Veterinary Technology

The Associate in Applied Science (A.A.S.) degree is awarded to students who graduate from one of the following programs:

- Architectural Drafting & Design Technology
- Automotive Technology
- Biomedical Equipment Technology
- Carpentry & Cabinetmaking Technology
- Diesel Truck Technology
- Distribution & Supply Logistics Technology
- Electrical Construction & Maintenance Technology
- Electronic Technology
- Precision Machining Technology

ADMISSIONS INFORMATION

Johnson College accepts qualified students regardless of race, religion, disability or national origin, and admissions are on a rolling basis. The technical core of each program begins in the fall semester; however, students may enroll in general education courses anytime. Applicants should be high school seniors, high school graduates, or recipients of high school equivalency certificates (GED). Completion of one year of algebra with a grade of “C” or higher is required for all programs.

Applicants are encouraged to arrange for a campus visit and a personal information session with an admissions representative and appointments may be made to meet with appropriate faculty and current students.

Special admissions requirements for Radiologic Technology and Veterinary Technology applicants may be found on Page 68 and Page 74, respectively.

How to Apply

Prospective students may contact the Admissions Department at:

Johnson College
3427 North Main Avenue
Scranton, Pennsylvania 18508-1495
(570)342-6404, extension 125, or (800)2WE-WORK (293-9675)
Attn: Admissions Department

or on-line at www.johnson.edu.

Application Requirements

A completed application should include the following:

- Completed application form
- \$30.00 non-refundable application fee
 Checks or money orders should be made payable to Johnson College.
- An official high school transcript or GED (a copy of the diploma and scores)
- An official transcript from each post-secondary institution attended, if applicable
- An official copy of SAT or ACT scores
- One letter of reference from a teacher, guidance counselor or employer
- Completed questionnaires for Veterinary Technology and Radiologic Technology applicants

Admission Requirements

For all programs

- 1 year of algebra with a grade of “C” or higher
- 2 years of English with a grade of “C” or higher

Associate in Applied Science and Computer Information Technology

- GPA of 2.00 or higher

Associate in Science

- GPA 2.50 or higher

Johnson College only enrolls students who have earned a high school diploma or GED.

Acceptable scores on either the Scholastic Aptitude Test (SAT) or American College Test (ACT)

- Minimal test scores for Associate in Applied Science programs:

SAT 750 ACT 15

- Minimal test scores for Associate in Science programs:

	SAT	ACT
Computer Information Technology	750	17
Radiologic Technology	850	17
Veterinary Technology	900	18

The new writing component of the SAT will be reviewed by the Admissions Office and may assist in determining placement and/or admission to the College for all programs.

- Applicants who do not have SAT or ACT scores are required to take the College Board ACCUPLACER exam (administered by the Student Support Services Office of Johnson College) and submit those scores in place of the SAT or ACT scores.

Minimal ACCUPLACER scores for all programs:

Elementary Algebra	50
Reading Comprehension	54
Sentence Skills	60

Note: Some applicants may be given a conditional acceptance contingent upon successful completion of the Johnson College Preparatory Program (see Page 11).

- Special admissions and/or enrollment requirements and application deadline dates for Biomedical Equipment Technology, Radiologic Technology, and Veterinary Technology are on Page 50, Page 68, and Page 74, respectively.

Upon acceptance, applicants are required to remit a tuition deposit of \$250. See **Enrollment Information** on Page 11 for further information on the tuition deposit and other enrollment requirements.

Advanced Standing

Students who have completed advanced courses in high school or vocational-technical school may be eligible for advanced standing.

Students seeking advanced standing should indicate their intention to the Admissions Office prior to the beginning of the semester. Such students will be required to complete an application for advanced standing and to take a competency exam. Upon completion of the exam (a grade of “B” or above is required for advanced standing), students will be notified and the information will be entered on their transcript but not calculated into their GPA. Advance Placement scores from the College Board may be substituted for the College’s advanced standing exam.

Credit for Military Experience

Students who have completed educational programs offered by branches of the American armed services may be granted academic credit for their coursework. Students should submit an official transcript of their coursework as part of the admissions process. Transcripts will be evaluated according to the guidelines stated by the American Council on Education. If credits are granted, students will be notified and the information will be entered on their transcripts. Applicants who have served in the armed services must submit a certified copy of form DD-214, Report of Separation.

Acceptance

Admission decisions include an evaluation of the applicant’s desire, ability, and potential for success. Interviews with admissions representatives are recommended. All application materials will be reviewed and evaluated by the Director of Enrollment Management. The Director will make the final acceptance decision.

Campus Visit

Applicants are encouraged to visit the College, tour the facilities, meet with students, and discuss career goals with the admissions staff.

Career Advising

Applicants are encouraged to arrange for career advisement which is available by

appointment without charge.

Re-admission

Accepted students who have not been enrolled continuously, missing at least one semester (excluding summer session), may apply for re-admission by calling the Registrar's Office. A re-admission application must be completed and submitted with a \$15.00 re-admission fee.

Students re-enrolling are required to complete the graduation requirements in effect at the time they re-enroll. Courses previously taken will be evaluated to determine if they meet the current requirements. Students wishing to return who were on academic probation may be required to meet with the Vice President of Academic Affairs prior to being considered for re-admission. After notification of re-admission, students must complete normal course registration procedures in conjunction with an academic advisor.

Information on the re-admission policy for Radiologic Technology students may be obtained from the Radiologic Technology Handbook.

Veterans

Johnson College welcomes veterans and assists them in carrying out their responsibilities with the Veterans' Administration.

Rehabilitation

Johnson College welcomes students under the sponsorship of the Office of Vocational Rehabilitation (OVR) and will make reasonable accommodations for the disabled.

Transfer Students

Coursework previously completed at another institution will be evaluated relative to its equivalency to Johnson College courses and to the specific major. Final decisions on acceptance of coursework from other institutions will be made by the appropriate Department Chairperson and the Registrar. Students who wish to transfer courses must follow the procedures below:

- complete the steps listed under Application Requirements
- have official transcripts from all previously attended colleges sent directly to the Registrar's Office
- provide course descriptions or a college catalog.

A copy of the evaluation will be provided to the student.

The College accepts a maximum of 30 credits from another institution. Of the remaining credits required for graduation, a minimum of 37 must be completed at Johnson College.

Only courses completed with a grade of “C” or higher will be considered for transfer credit. Transfer credit will appear on the student’s transcript but only credits from Johnson College will be used in computing the student’s Grade Point Average (GPA) and eligibility for academic honors. It is the responsibility of the student to ensure that all courses have been evaluated prior to registration to avoid duplication of courses.

Coursework completed within the past ten years will be evaluated according to current standards. Coursework completed more than ten years ago will be evaluated on a course-by-course basis by the Vice President of Academic Affairs, Registrar and the appropriate Department Chairperson.

Once accepted to Johnson College, students may transfer no more than six additional credits. The appropriate Department Chairperson must approve coursework from another institution. Upon completion of coursework, an official transcript must be forwarded to the Registrar’s Office. It is the responsibility of the student to ensure that these transcripts are forwarded to the Registrar.

Transfer of Credit with Baccalaureate Institution

Johnson College has program specific articulation agreements with two baccalaureate awarding institutions, Marywood University and the State University of New York, Utica/Rome/Canton campuses. The College also participates in a Next-Step Program with the University of Scranton; additional information on this program is available in the Career Services Office and the Registrar’s Office.

Credit by Examination

Full-time students who are currently enrolled in a course and believe that they have adequate knowledge of the subject may request to receive credit by examination. To complete a course under this policy, students must make arrangements with the class instructor and obtain approval from the appropriate Department Chairperson, the Vice President of Academic Affairs, and the Registrar. Students should submit a completed Credit by Examination form (obtainable from the Registrar’s Office) along with a \$100 fee. Testing must take place prior to completion of the third week of classes. No more than three full-course equivalents completed through Credit by Examination may count toward a degree. Further information on Credit by Examination may be obtained in the Registrar’s Office.

ENROLLMENT INFORMATION

Applicants who are accepted to Johnson College must meet the requirements listed below.

Tuition Deposit

A \$250.00 tuition deposit is required from accepted students. This deposit will be applied to first-semester tuition. Deposits will be refunded according to ACCSCT standards to accepted students who do not enroll.

ACCUPLACER College Placement Exam

All newly-accepted students are required to take the ACCUPLACER College Placement Exam. The ACCUPLACER exam tests students in three areas: Elementary Algebra, Reading Comprehension, and Sentence Skills. Based on the test results, students may be required to participate in the Johnson College Preparatory Program. Written notification of test scores will be provided within two weeks of the test date. If the minimal score is not achieved, students have the option of re-taking the test after a two-week waiting period.

Johnson College Preparatory Program

The Johnson College Preparatory Program provides academic reinforcement services prior to the start of the freshman year. The Program includes math, writing, reading, and study skills courses as well as access to a computer lab. An accepted student who does not meet minimal ACCUPLACER scores (see Page 7) will be required to complete one or more College Prep courses. These courses must be completed prior to the start of the student's program of study with a grade of "C" or higher. A student who fails to achieve a minimal grade of "C" for the course(s) is ineligible to continue his or her program of study at Johnson College. Taking these courses may result in extending a student's program of study and, consequently, may have an impact on eligibility for financial aid.

Medical Inoculations

On-campus housing students are required to provide proof of immunization against meningococcal disease to the Admissions Office before being permitted to live on campus.

Information on medical inoculations for Biomedical Equipment Technology, Radiologic Technology and Veterinary Technology students is on Page 50, Page 68, and Page 74,

respectively, in the Special Enrollment Requirements section.

Criminal Background Check Alcohol and Drug Screening

Some programs of study, educational experiences such as clinical practicums, internships, and cooperative education programs, as well as potential employers, may require a criminal background check and/or drug screening. Johnson College is not responsible for the decisions or actions of other institutions or organizations that may result from students' failure of drug screening or background check or students' failure to report the results of these tests to the College.

The results of a criminal background check will not necessarily preclude admission to Johnson College.

The Freshman Orientation program includes an in-service presentation on the use of drugs and alcohol.

Health Clearance

All enrolled students must have a physical exam and physician signature on the health clearance form prior to the start of the first enrolled semester.

TUITION, FEES, EXPENSES

The following tuition and fees are for the 2006-2007 academic year. The College reviews tuition and fees annually and reserves the right to adjust fees when necessary.

Application Fee

A \$30.00 application fee is required of every applicant for degree-seeking status. This fee is refundable only if a student cancels the application within three days of payment.

Tuition Deposit

Accepted students must submit a \$250.00 deposit within 30 days of receipt of an acceptance letter. This deposit is required prior to registration and is credited to the student's tuition account.

Tuition

Tuition for full-time attendance (12 to 21 credits per semester, 24 to 42 credits per academic year) for the 2006/2007 academic year is \$12,246.00.

Tuition for part-time attendance (fewer than 12 credits per semester) is based on the number of credits for which a student registers. The tuition rate per credit is \$340.00.

Additional Fees

All students are required to pay the following annual fees except as indicated:

General Fee **\$250.00**

The general fee covers Student Government allocations, student activities, auto registration/roadway maintenance, and accident insurance with \$25,000.00 medical coverage per accident.

Program Fee **\$500.00**

The program fee defrays the institutional operating costs associated with maintaining and upgrading equipment within each program.

Computer Lab Fee **\$250.00**

The computer lab fee covers the cost of utilization of the computer labs and a personal e-mail account for all students.

Orientation Fee **\$100.00** (*freshmen only*)

The Orientation Fee covers the cost of the College's Freshman Orientation program.

Graduation Fee **\$125.00** (*to be submitted with graduation application*)

The graduation fee covers the cost of diplomas, caps and gowns, invitations, and the post-graduation reception. There is no reduction in the fee for graduates who do not attend commencement. The graduation fee is required for each degree earned.

On-Campus Housing

The on-campus housing cost is \$2,975.00 (three payment options available) per student for a double-occupancy apartment. This cost applies only to students who live in on-campus housing. A one-time security deposit of \$300.00 is required. Housing students are responsible for their own electric bills which include the cost of heat. Students who would like to have telephone, cable and/or internet connection services are responsible for those expenses.

Books & Supplies

Books and supplies will cost approximately \$1,500.00 per school year; this amount may vary substantially depending on the program in which a student is enrolled.

Transcript Fee

Johnson College will provide an official transcript to each student, free of charge, at graduation. Subsequent transcripts are available at a fee of \$5.00 each upon written request. Request forms may be obtained from the Registrar's Office. Official transcripts (bearing the seal of the College) are sent directly to the university, college, agency or employer indicated by the student. Official transcripts will not be issued unless all financial obligations have been met at the time of the request. Johnson College is permitted to withhold official transcripts from former students who have defaulted on a federal Stafford Loan. A copy of the transcript will be furnished to the former student with the notation "unofficial" stamped on it. Unofficial transcripts may be requested by students for their personal use at a fee of \$5.00.

Medical Inoculations

Information on medical inoculations for Biomedical Equipment Technology, Radiologic Technology and Veterinary Technology students is on Page 50, Page 68, and Page 74, respectively, in the Special Enrollment Requirements section.

Special Fees

Information on special fees for Biomedical Equipment Technology, Radiologic Technology and Veterinary Technology is on Page 50, Page 68, and Page 74, respectively.

Other Fees

Change of grade	\$ 25.00
Late registration	\$ 30.00
Drop/Add a course	\$ 15.00
Re-admission	\$ 15.00
Credit by Examination	\$100.00

FINANCIAL AID

Financial aid helps meet college costs, both educational (tuition, fees, and books) and living (food, housing, and transportation) for those who qualify. Through various programs offered by state and federal governments, as well as private lenders, financial aid helps the cost of education become affordable.

Several forms of financial assistance are available to students who qualify. Participation in programs funded by state and federal agencies requires the Financial Aid Office to comply with the regulations set forth by each agency concerning student eligibility and academic progress standards. This will generally require the completion of the Free Application for Federal Student Aid (FAFSA).

Responsibility for financing an education rests first with students and their families. Financial aid should be viewed as supplementary, to be used only after the full resources of students and their families are committed.

A detailed booklet, "A Guide to Federal Student Aid," is updated annually by the U.S. Department of Education and is available through the Financial Aid Office to provide a comprehensive description of funding sources, procedures, general filing dates, and related information.

Eligibility

Each funding source has its own eligibility requirements; further information is available through the Financial Aid Office.

Grants

The following grants are need-based aid to eligible students:

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- PHEAA Grant (Pennsylvania Higher Education Assistance Agency)
- Johnson College Institutional Grant

Loans

- Federal Stafford Subsidized Student Loan
- Federal Stafford Unsubsidized Student Loan
- Federal Parent Loan for Undergraduate Students (PLUS)

Employment

Students who are interested in on-campus employment through work-study programs may obtain further information from the Financial Aid Office.

Federal Work-Study: an on-campus, federally-funded employment program that provides supplemental assistance to students who demonstrate financial need. The rate for 2006/2007 was \$7.25 per hour.

Johnson College Work-Study: an on-campus, institutionally-funded employment program that provides supplemental assistance to students regardless of financial need. The rate for 2006/2007 was \$7.25 per hour.

Academic Progress and Financial Aid Awards

Students must maintain satisfactory academic progress in order to continue receiving financial aid. Students must maintain a Grade Point Average (GPA) of at least 1.80 for the first semester and 2.00 for subsequent semesters while completing a specified number of credits per academic year based on their enrollment status. This involves maintaining a cumulative GPA of at least 2.00 and successfully completing the necessary credit requirements according to state and federal regulations.

It is important that students receiving financial aid contact the Financial Aid Office before withdrawing from any course since financial aid eligibility may be affected for the current or the next semester of enrollment. Losing financial aid because of lack of academic progress does not mean that students must withdraw from the College but does mean that students become personally responsible for tuition and fees. Financial aid eligibility may be reinstated when satisfactory academic progress requirements are met.

Students who are enrolled full-time (12 or more credits per semester) must successfully complete a minimum of 24 credits at the end of two semesters, a minimum of 48 credits at the end of four semesters, and complete their degrees within six semesters.

Students enrolled on a three-quarter-time basis (9 to 11 credits per semester) must earn a minimum of nine credits per semester and complete their degrees within eight semesters with 12 semesters being the maximum allowed by law.

Students enrolled on a half-time basis (6 to 8 credits per semester) must earn a minimum of six credits per semester and complete their degrees within 12 semesters with 18 semesters being the maximum allowed by law.

Students whose enrollment status varies during the academic year must earn a

proportionate amount of credits.

A successfully completed credit is one for which students earn a grade of A, B, C, or D. A grade of Incomplete, Withdrew, and F do not represent successful course completion and credits are not counted toward students' degrees. Students must complete a minimum of 24 credits to advance a grade level; for example, 0 to 23 credits is grade level one, and 24 and above credits is grade level two. Students who are required to repeat a course for which credit has already been given (because of a low cumulative average), will receive credit only once in meeting the 24-credit requirement for financial aid.

Detailed descriptions of Johnson College's financial aid, academic progress policy, and PHEAA's policy are on file in the Financial Aid Office.

Financial Aid Appeals

Students who fail to meet academic progress requirements due to extenuating circumstances may appeal the termination of their financial aid. Appeals must be made in writing to the Director of Financial Aid and must include an explanation of the student's situation, along with a request for reinstatement of financial aid. Any substantiating documentation should be submitted with the letter of appeal. Based upon a review of a student's circumstances, the Director of Financial Aid and the Vice President of Academic Affairs may make allowable exceptions to the academic progress requirements. All such appeals will be reviewed on an individual basis and will take into consideration special circumstances and improved academic performance.

Industry Tuition Reimbursement Plans

Many companies provide their employees with reimbursement for education expenses. Students should consult their employer for further information. Arrangements for this type of payment should be set up with the Bursar's Office prior to the start of classes.

Scholarships and Merit Awards

In addition to the financial aid programs cited above, eligible students may apply for a variety of Johnson College scholarships and merit awards. Scholarships have individual criteria which may be obtained in further detail through the Financial Aid Office. Scholarships and merit awards are not necessarily renewable from first year to second year and may require re-application.

Award amounts for endowed scholarship funds are determined annually according to earnings on the funds and in accordance with Johnson College policies. Annual awards

of non-endowed scholarships are determined on a year-to-year basis contingent on continued funding of the scholarships.

Students who are interested in applying should contact the Admissions Office or the Financial Aid Office for the 2007-2008 deadline dates.

Scholarships

Alekna Memorial Scholarship is based on financial need after other forms of financial aid have been awarded. Preference is given to students from the Tunkhannock, Elk Lake or Lackawanna Trail (Pennsylvania) school districts. The Johnson College Scholarship Committee selects the recipient(s).

Edgar A. and Ida M. Alekna Scholarship provides funds to students who demonstrate financial need. Students of all majors are eligible. The Johnson College Scholarship Committee selects the recipient(s).

John K. and Mary E. Blackledge Memorial Scholarship, Mr. & Mrs. John P. Sweeney, Sr., Benefactors, is awarded to a first-year student. The scholarship is renewable for the second year if the recipient continues to meet the scholarship criteria. The Johnson College Scholarship Committee selects the recipient(s).

Margaret Briggs Scholarship is awarded to a first or second-year student with financial need; preference is given to students from Lackawanna County. The Johnson College Scholarship Committee selects the recipient(s).

Vernon "Terry" Decker Scholarship is awarded to a second-year student, with preference given to a student in the Electronic Technology program. The Johnson College Scholarship Committee selects the recipient(s).

Econoco Corporation Scholarship, established in honor of Paul Detwiler, Vice President of Logistics at Econoco Corporation, is awarded to a student with financial need in the Distribution & Supply Logistics program. The Johnson College Scholarship Committee selects the recipient(s).

Ben Franklin Award of the Scranton Area Foundation is awarded to a second-year student from Lackawanna, Pike, Susquehanna, or Wyoming County (Pennsylvania). Academic achievement, good citizenship and financial need are considered in the selection process. The Johnson College Scholarship Committee selects the recipient(s).

John T. Gerod Scholarship is awarded to a first or second-year student with preference given to students enrolled in the Precision Machining Technology program. This

scholarship is based on instructors' recommendations, scholastic achievement, and a sincere interest in the machine trades field. The Precision Machine Technology Chairperson and the Johnson College Scholarship Committee select the recipient(s).

Hawk College Assistance Grant is available to the dependent child of a current employee of Gertrude Hawk Chocolates, Inc. who meets the established criteria. Grant applications originate in the Gertrude Hawk office and the company selects the recipient(s).

Thomas Hesser Scholarship is awarded to a first or second-year student enrolled in the Automotive Technology program. It is based on educational achievement, initiative and desire to succeed, as well as instructors' recommendations. The Automotive Technology Program Chairperson and the Johnson College Scholarship Committee select the recipient(s).

Hill's Pet Nutrition, Inc. Scholarship is awarded to a second-year student with financial need in the Veterinary Technology program. The Veterinary Technology Program Chairperson and the Johnson College Scholarship Committee select the recipient(s).

Frank & Jean Hubbard Scholarships are awarded to graduates of North Pocono High School who will be attending their first year at Johnson College and who are recommended by their principal or guidance office for demonstrating scholastic achievement, leadership, entrepreneurial abilities, and financial need. The recipient must take 15 credits each semester and the scholarship is renewable when specific conditions are met. Recipients are reviewed on academic achievement and chosen by North Pocono High School and the Johnson College Scholarship Committee.

Paul W. Krause Memorial Scholarship is awarded to a first-year student with financial need. The Johnson College Scholarship Committee selects the recipient(s).

Lackawanna Home Builders Association Scholarship is awarded to a second-year student in the Carpentry & Cabinetmaking Technology program who is a resident of Lackawanna County (Pennsylvania) and a full-time student with a first-year minimum GPA of 3.00. It is based on academic performance, citizenship, and financial need. The Carpentry & Cabinetmaking Program Chairperson and the Johnson College Scholarship Committee select the recipient(s).

Ruth Stitt Morgan Memorial Scholarship is given to a second-year student enrolled in the Veterinary Technology program. The recipient must have a GPA of 3.00 and a satisfactory performance in the first-year clinical rotation. The Veterinary Technology Program Chairperson and the Johnson College Scholarship Committee select the recipient(s).

John R. O'Hara Scholarship assists a first-year student from the Greater Scranton-Lackawanna County (Pennsylvania) area who demonstrates academic excellence, leadership qualities, community commitment and technology area excellence. The O'Hara family, the College President and the Chairman of the Board of Directors of Johnson College select the recipient.

Pennsylvania Cooperative Vocational Education Association Scholarship is awarded to a student who has participated in a high school cooperative education program. Grant applications originate with high school cooperative education instructors. Recipients are selected by the PCVE Association through an application/interview process.

Anthony Ploskonka Memorial Scholarship is awarded to a first-year student with a minimum high school grade point average of 3.00; recipients must perform a minimum of ten hours of community service per year. The scholarship is renewable for the second year if the recipient continues to meet the scholarship criteria. The Johnson College Scholarship Committee selects the recipient(s).

Irene Ploskonka Memorial Scholarship is awarded to a first-year student with financial need and a minimum high school grade point average of 2.50; recipients must perform a minimum of ten hours of community service per year. The scholarship is renewable for the second year if the recipient continues to meet the scholarship criteria. The Johnson College Scholarship Committee selects the recipient(s).

Pocono Mountain Street Rod Association Scholarship is awarded to a second-year student enrolled in the Automotive Technology program. The recipient must be a full-time student with financial need and have a minimum GPA of 2.50. The Automotive Technology Program Chairperson and the Johnson College Scholarship Committee select the recipient(s).

Scranton UNICO Foundation Scholarship is awarded to a first-year student with financial need; the recipient may re-apply for second-year funding. The Johnson College Scholarship Committee selects the recipient(s).

Shoemaker Award is given to a first or second-year student enrolled in the Automotive Technology or Diesel Truck Technology program. The recipient must be a full-time student with financial need. The Automotive Technology Program Chairperson, the Diesel Truck Technology Program Chairperson and the Johnson College Scholarship Committee select the recipient(s).

Society of Broadcast Engineers, Chapter II is awarded to a student in the Electronic Technology program who intends to pursue a career in electronic media. The Electronic

Technology Program Chairperson and the Johnson College Scholarship Committee select the recipient(s).

Islyn Thomas Achievement Award is given to a first or second-year student with preference given to students enrolled in the Precision Machining Technology program. This scholarship is awarded to one student annually, based on financial need, community service, and technology area excellence. The Precision Machine Technology Chairperson and the Johnson College Scholarship Committee select the recipient(s).

Merit Awards

Orlando S. Johnson Merit Award is given to two first-year students who have a Scholastic Aptitude Test (SAT) score of 1,000 or higher and a GPA of 3.30 or higher. The Johnson College Scholarship Committee selects the recipient(s).

Richmond Merit Award is given to two first-year students who have an SAT score of 850 or higher and a GPA of 3.00 or higher. The Johnson College Scholarship Committee selects the recipient(s).

Moffat Merit Award is given to two first-year students who have an SAT score of 800 or higher and a GPA of 2.80 or higher. The Johnson College Scholarship Committee selects the recipient(s).

Technology Merit Award is given to two first-year students who have a GPA of 3.00 or higher and community or technology work experience. The Johnson College Scholarship Committee selects the recipient(s).

To apply for any of the scholarships and/or merit awards, the following materials must be completed and submitted to the Financial Aid Office by the deadline date:

- application for admission to Johnson College
- official high school transcript
- a completed and submitted Free Application for Federal Student Aid (FAFSA) for the appropriate academic year
- a completed application form and typewritten essay*.

*The essay should be composed of 500 words or three to five double-spaced typed pages explaining how applicants can make a difference at Johnson College and how the scholarship/merit award will help applicants achieve their career goals. Applicants should refer to any employment, community service or volunteer experiences related to their career goals or their communities.

Scholarships and/or merit awards will not be posted to the recipients' tuition accounts until the following requirements have been met:

- registration as a full time student
- satisfactory academic progress
- attendance at the Scholarship Recognition Luncheon (generally held during the fall semester)
- acknowledgement to the benefactor in writing (this will be facilitated at a meeting of all recipients).

WITHDRAWAL AND ADJUSTMENT OF CHARGES

Students who officially withdraw from their programs of study at Johnson College may be eligible for an adjustment of tuition charges and fees. Adjustments are based on the official date of withdrawal or the last day of documented class attendance, as determined by the Registrar.

Tuition Adjustment

Students who withdraw or are terminated from Johnson College during the semester will be entitled to an adjustment of tuition and fees according to the following schedule:

Withdrawal:	Adjustment:	Withdrawal:	Adjustment:
before classes begin	100%*	sixth week	60%
first week	90%	seventh & eighth week	50%
second & third week	80%	ninth & tenth week	40%
fourth & fifth week	70%	after tenth week	no refund

*See Application of Policy (1) on Page 25.

Johnson College Institutional Grants, PHEAA grants, and scholarship funds awarded to students who withdraw or are terminated will be adjusted according to the same schedule.

Federal aid and/or state grant assistance (such as PHEAA) and/or institutional assistance from Johnson College may not cover all unpaid institutional charges due the College upon the student's withdrawal. In such cases, students will be billed for remaining balances.

State Guidelines

Pennsylvania and other state's grants will be adjusted in accordance with the agency's stated guidelines. PHEAA Grant funds are generally reduced by the same percentage as the tuition reduction received by students who withdraw from their programs of study. However, it should be noted that PHEAA reserves the right to make the final decision on the percentage of the reduction.

Federal Guidelines

In accordance with federal regulations, students who receive federal financial aid and withdraw from Johnson College during the first 60% of a semester will have their federal financial aid adjusted based on the percentage of the semester completed prior to the withdrawal. Students will be entitled to retain the same percentage of the federal financial

aid received as the percentage of the semester completed. This percentage is calculated by dividing the number of days in the semester (excluding breaks of five days or longer) into the number of days completed prior to the withdrawal (excluding breaks of five days or longer). The date of withdrawal will be based on the official date of withdrawal or the last day of documented class attendance as determined by the Registrar.

Once the amount of federal funds to be returned has been calculated, the funds will be returned in the following order:

- Unsubsidized Stafford Loans
- Subsidized Stafford Loans
- Parent Loan for Undergraduate Students (PLUS)
- Pell Grants
- Federal Supplemental Educational Opportunity Grants (FSEOG).

The amount to be returned to a specific federal program may not exceed the total amount awarded from that program.

First-year, first-time borrowers who withdraw before the 30th calendar day of the program of study are prohibited from receiving Federal Family Education Loan (FFEL) program funds (Unsubsidized Stafford Loans and Subsidized Stafford Loans) at the time they withdraw.

Application of Policy

(1) All monies paid by an applicant must be refunded if requested within three days after signing an enrollment agreement and making an initial payment. An applicant requesting cancellation more than three days after signing an enrollment agreement and making an initial payment, but prior to entering the school, is entitled to a refund of all monies paid minus a registration fee of 15% of the contract price of the program, but in no event may the school retain more than \$150. Any refunds due to applicants shall be refunded within 30 days from a notice of cancellation or failure to appear on or before the first day of class.

(2) Any refunds due to students who begin attending classes shall be refunded within 30 days from the date of withdrawal or the last day of attendance as determined by the Registrar, whichever is later.

(3) The withdrawal date is used to determine the percentage of the period of enrollment completed and, therefore, the amount of aid a student has earned. The date of determination that the student is no longer enrolled is used in the following circumstances:

- Students who receive a refund of financial aid prior to withdrawing from Johnson College may owe a repayment of the federal financial aid funds received. Students will be contacted by the Financial Aid Office in such situations and will be given 30 days from the date of determination to repay the funds to Johnson College. Students who fail to return the unearned portion of federal financial aid funds given to them will become ineligible for continued receipt of financial aid until such time as the repayment is made.
- Within 30 days of the date of determination, Johnson College must return the amount of federal funds for which it is responsible.
- Within 30 days of the date of determination, Johnson College must offer withdrawing students any amount of post-withdrawal disbursement that is not credited to the student's account.
- Within 90 days of the date of determination, Johnson College must respond to a request by a student or parent to make all or a portion of the post-withdrawal disbursement.

No refunds will be given for purchases made in the Johnson College bookstore.

Further information about refunds or rebates of financial aid may be obtained from the Financial Aid Office.

ACADEMIC INFORMATION

Freshman Orientation

Freshman Orientation is held to help incoming students adjust to college life and provide the information needed to make them successful at Johnson College. All new students are required to attend.

Registration

Registration for incoming fall freshmen is handled by the Registrar's office as part of the enrollment process. Subsequent registrations are held twice a year during the prior semester. The dates of registration will be announced by the Registrar. A late registration fee of \$30.00 is charged to students who fail to register during those dates.

Students will receive a packet including a Course Offering booklet, a copy of their Degree Audit and a registration form. Fall freshmen are given their schedules and may make any necessary schedule changes during the first week of the semester.

Students who have outstanding balances will not be permitted to register.

All students must meet with their academic advisor prior to registration and obtain an official class schedule from the Registrar.

Students are permitted to attend only those classes for which they have officially registered and paid. An officially registered student is one who:

- has submitted an approved registration form
- has reconciled all charges with the Business Office
- has been accepted for scheduling by the Registrar.

It is the responsibility of the students to ensure that they are following the suggested program outline and meeting all program requirements for graduation. Failure to do so may result in extending their program of education.

Student Academic Course Load

A student is considered full-time when registered for a minimum of 12 credits per semester. A student is considered part-time when registered for fewer than 12 credits. A student typically carries 12 to 21 credits in both the fall and spring semesters. An academic overload occurs when a student attempts to register for more than 21 credits in

a semester. Students who wish to register for more than 21 credits must have the permission of the Vice President of Academic Affairs. Students who are granted permission for an academic overload are subject to additional tuition charges.

Change of Name and/or Address

The Registrar's Office must be informed of any changes to a student's personal information, such as name, address, telephone number, and/or place of employment. It is the student's responsibility to keep the College informed of any changes to student information. In the event of a name change, a marriage license or divorce decree must be presented along with the Name Change form. Name Change forms may be obtained through the Registrar's Office.

Formation of Sections and Cancellation of Courses

Johnson College reserves the right to cancel a program, course, or section, to change the time of meeting, to subdivide a section, or to combine two or more sections as circumstances may require. Every effort is made to minimize the impact of such changes on students. Students who are involved in a change of schedule should see their academic advisor, mentor or the Registrar.

Verification

A verification letter provides proof of enrollment, graduation, student status, or other student related information. It does not provide specific course or grade information as found on an official transcript. Verification letters may be requested by organizations such as a student's financial lender, insurance company or sponsor. Verifications are provided free of charge to all students, both current and previously enrolled students. Letters verifying enrollment will not be provided prior to the beginning of the semester; if student needs verification prior to the start of the semester, a letter will be provided stating that the student is "scheduled to enroll."

Approval for Off-Campus Study

Johnson College will accept credits from other institutions for courses taken by a current student provided the student receives approval from the appropriate Department Chairperson prior to registering for the course and completes the necessary paperwork. The student also must provide the Johnson College Registrar with an official transcript verifying a grade of "C" or higher upon completion of the course. Students may not transfer more than six credits in approved off-campus classes. Approval forms may be obtained through the Registrar's Office.

Change of Schedule

After a student is registered, changes to the schedule may be made through the process of adding and/or dropping a course. Students may be admitted to another course or change sections only during the first academic week of a semester. Schedule Change forms are available through the Registrar's Office. A \$15.00 Drop/Add fee will be assessed for each Drop/Add form submitted. Tuition charges, student financial aid, and enrollment status will be adjusted accordingly when a course is dropped or added.

Student Initiated Dropping of a Course

From the first day of class to the end of the second week of the semester, a student may drop a course without penalty, provided a Drop/Add form is submitted with the required signatures. Dropping a course during this period results in no grade or transcript record.

From the third week of the semester to the end of the tenth week of class, a student-initiated withdrawal receives a "WP" (Withdrew Passing) or "WF" (Withdrew Failing) grade which is not calculated into the student's Grade Point Average (GPA) but does appear on the student's transcript.

From the eleventh tenth week to the last day of the course, students are not permitted to withdraw from a class.

Student Initiated Adding of a Course

A student may add a course during the first week of a 16-week semester provided a Drop/Add form is submitted with the required signatures.

After the first week of the semester, approval from the course instructor is required to add a course.

After the third week of the semester, approval of the Vice President of Academic Affairs is required to add a course.

Repeated Courses

Students may repeat a course in order to improve their Grade Point Average (GPA). The repeated course will appear on the student's transcript twice. The original grade will be replaced with an "R" and only the new grade will be used in calculating the student's GPA. A course may be repeated no more than three times.

Students receiving a grade of "D" or "F" may elect to take the course at another institution and transfer the credit for it to Johnson College. In this event, the original grade will be replaced with an "R" and will be used only in calculating the total number

of credits required for graduation. Transfer credit will not be used in the calculation of a student's cumulative GPA.

Credit Hours and Grading System

Each course has a credit-hour value based upon the required number of hours per week in the classroom, laboratory, or trade area.

- clock hour = 50 minute period
- 15 hours of lecture = 1 credit
- 30 hours of lab = 1 credit
- 45 hours of internship = 1 credit
- 45 hours of technical area = 1 credit
- clinical practicum 240-360 hours (Radiologic Technology students only) = 1 credit

Course achievement levels and cumulative Grade Point Averages are provided on semester transcripts using the following grading system:

Letter Grade	Significance	Numerical Relationship	Quality Points
A	Outstanding	90 - 100	4.00
B+	Commendable	85 - 89	3.50
B	Good	80 - 84	3.00
C+	Above Average	75 - 79	2.50
C	Average	70 - 74	2.00
D+	Below Average	65 - 69	1.50
D*	Deficient	60 - 64	1.00
F	Failure	0 - 59	0.00
I**	Incomplete		
WP	Withdrew Passing		
WF	Withdrew Failing		

* Minimal passing grade

** A grade of "Incomplete" will be awarded only in exceptional circumstances. A grade of "Incomplete" in a semester-schedule course must be completed within 30 school days. A grade of "Incomplete" in a module-schedule course must be completed within 10 school days. If the grade is still "Incomplete" beyond this period, the grade becomes an "F" or Failure and the course must be repeated.

Grade Point Average is computed using the following formula:

$$\text{GPA} = \frac{\text{total quality points earned per semester(s)}}{\text{total credit hours attempted per semester(s)}}$$

Satisfactory Academic Progress

Students must maintain a Grade Point Average (GPA) of at least 1.80 for the first semester and 2.00 for subsequent semesters, while completing at least 24 credits per academic year based on their enrollment status. Failure to maintain the prescribed GPA may prevent students from progressing to higher level courses within their program and may result in dismissal from the program.

Students who are in danger of not meeting the GPA requirement are advised to meet first with their faculty advisor and then with the Registrar to discuss alternatives and options.

Students must complete their degree within three years.

Information on minimum GPAs for Radiologic Technology and Veterinary Technology students is on Page 69 and Page 75, respectively, in the Retention section.

Change of Major

A change of major may be made at any time during the first two academic weeks of a semester. Currently enrolled students who wish to change their major must complete a Change of Major form and obtain the required signatures as indicated on the form. Forms may be obtained through the Registrar's Office.

Academic Probation and Dismissal

Students whose GPA is below the minimum standard of 1.80 for the first semester or 2.00 in subsequent semesters will be placed on academic probation for the next semester. Students on probation are required to follow *Guidelines for Students on Academic Probation* as outlined in the Johnson College Student Handbook and to participate in the College's SUCCESS Program. After completion of the probationary period, students are required to maintain a minimum cumulative GPA of 2.00.

Students who fail to satisfy the minimum standards for academic progress may be dismissed from the College.

Second Degree

Students who wish to obtain a second degree may do so if they fulfill the following requirements:

- Students must be admitted into the major program in which the second degree is desired by the Department Chairperson.

- Students must meet all of the curriculum requirements of the second degree for both major and required courses and successfully complete those courses which cannot be equated with courses taken in the first degree program.
- Students must meet with the Registrar and the Department Chairperson of the second degree program to determine the minimum number of credits that need to be completed for the second degree in addition to the credits taken in the first degree program.

Academic Honors and Recognition

The President's List

The President's List is published at the end of each semester citing students who achieve a minimum 3.90 GPA, while carrying a minimum of 12 Johnson College credits and matriculating toward a degree. Students who receive a grade of WF, F, or I on their transcript for the semester will not qualify for the President's List.

Honors upon Graduation

Graduating students are eligible for recognition based upon scholastic merit. Highest Honors Awards are conferred on graduates with the highest cumulative GPAs among the candidates for the Associate in Applied Science and the Associate in Science degrees. *Summa Cum Laude*, *Magna Cum Laude*, and *Cum Laude* are citations conferred by the College for exceptional academic achievement and completion of a challenging curriculum.

Students who earn a cumulative GPA of 3.90 or higher will graduate Summa Cum Laude. Those with a cumulative GPA of at least 3.80 and equal to or less than 3.89 will graduate Magna Cum Laude. Those with a cumulative GPA of at least 3.70 and equal to or less than 3.79 will graduate Cum Laude.

Medical Leave of Absence and Re-entry Policy

Johnson College observes a Medical Leave of Absence and Re-entry Policy. Further information is available in the Johnson College **Student Information Handbook**.

Class Cuts

Class cuts are not permitted and will be recorded as absences.

Attendance and Tardiness

Students are responsible for understanding and adhering to the following attendance policy:

- Students are required to be present and punctual for classes and scheduled conferences with instructors, mentors, and College administrators.
- Students who miss 15% of a course will receive a letter from the College stating the attendance policy.
- Students who miss 25% of a course may be advised by the instructor to withdraw from the course.
- Students who enroll for a course but do not attend classes and fail to formally withdraw from the course are financially responsible for the course.
- Students who withdraw from a course after the second week and before the tenth week of the semester because of absenteeism will receive a grade of “WP” (Withdraw Passing) or “WF” (Withdraw Failing), as appropriate, and are financially responsible for the course.
- Faculty members are required to record attendance daily.
- Announcement of the College closing due to inclement weather or emergency conditions will be made on the College’s website (www.johnson.edu) or by calling Johnson College at 570-342-6404 and following the prompts, WYOU-TV, WNEP-TV, and local radio stations.

Students’ attendance records will reflect tardiness according to the following formula: 25 minutes late or less will result in half a class period being deducted from total classes attended for the semester; 26 minutes to 50 minutes late, one class period deducted; and 51 minutes to 75 minutes late, one and a half class periods deducted.

Length of Programs

The academic year, consisting of two 16-week semesters, begins in August and ends in May. Programs of education are four semesters totaling 64 weeks except those which may require summer internships. Total program hours vary by department.

Make-up Work

When students are absent because of conditions beyond their control, they may be permitted to make up lost time in their academic and/or major courses. It is the responsibility of the student to request consideration for make-up work from the instructor. Make-up work is not permitted for the purpose of receiving Veterans Administration Training Allowances.

Graduation Requirements

Students must meet the following requirements in order to be eligible to graduate:

- completion of 64 credits for Distribution & Supply Logistics Technology; 68 credits for Carpentry & Cabinetmaking Technology, Electrical Construction & Maintenance Technology, Electronic Technology, Precision Machining Technology, Radiologic Technology, and Veterinary Technology; 71 credits for Architectural Drafting & Design Technology and Computer Information Technology; 74 credits for Automotive Technology, Biomedical Equipment Technology and Diesel Truck Technology
- completion of a minimum of 37 credits at Johnson College
- completion of a practicum/internship/cooperative education experience for students in the Biomedical Equipment Technology, Distribution & Supply Logistics Technology, Radiologic Technology, and Veterinary Technology programs
- achievement of a cumulative Grade Point Average (GPA) of 2.00. See Page 69 and Page 75 for information on the minimum GPA for Radiologic Technology and Veterinary Technology, respectively
- full payment or satisfactory arrangement to fulfill all financial obligations
- submission of a completed Graduation Application form by the stated deadline

Students who have not met the graduation requirements will not be allowed to participate in Commencement exercises, will not be eligible for Commencement Awards, and will not have their names listed in the Commencement Program.

Student Records and Record Maintenance

In accordance with the Family Educational Rights and Privacy Act of 1974 (FERPA), student records are maintained in the Registrar's Office of the College and are available for inspection by appointment during normal business hours. All documents are the property of Johnson College and may not be copied, duplicated or removed.

Student records may be viewed by College officials, certain federal and state agencies responsible for enforcement of the Privacy Act, officials of other colleges to which the student has sought enrollment, and accrediting institutions. In the case of a health or safety emergency, parents who claim a student as a dependent for income tax purposes may also view the records. All other requests for student educational records must have the written consent of the student.

The Privacy Act exempts certain records from the individual's examination, as follows:

- financial records of parents
- medical or paramedical records used only for treatment purposes; the individual may have a doctor or other competent professional review these records.
- law enforcement records that are used solely for law-enforcement purposes

- confidential letters of reference submitted prior to January 1, 1975 or letters of reference submitted after January 1, 1975 that were designated as confidential by the student at the time of his/her solicitation or submission.

Student Rights of Privacy and Access

Unless directed by the courts or by determination of a school official that a “need to know” situation exists, information other than “directory information” is not released without a student’s written consent. Directory information is determined to be a student’s name, address, telephone number, enrollment status, e-mail address, program of study, dates of attendance, participation in activities and sports, degrees awarded and dates of awarding.

If a student does not wish directory information to be released, a Request to Prevent Disclosure of Directory Information must be submitted to the Registrar’s Office. Students may restrict directory information from being released without their permission; however, this also will prevent the Registrar from releasing information to the media regarding graduation or awards since that information includes the student’s address.

Johnson College assumes that failure on the part of any student to specifically request the withholding of categories of “directory information” indicates individual approval for disclosure.

Johnson College will not release grade information to a student’s parent(s) or guardian(s) without the student’s written permission; no grade information will be released over the telephone.

Termination from the College

Johnson College makes every effort to assist students in achieving their academic goals; however, the College reserves the right to dismiss students due to special circumstances. In such cases, charges will be adjusted according to College policy and the College will:

- send letters of concern to the student
- counsel the student prior to termination or dismissal
- inform the student of his/her termination or dismissal.

Dismissal from a Program of Study

See Page 69 and Page 75 for information specific to the Radiologic Technology and Veterinary Technology requirements.

Withdrawal from the College

Students who wish to withdraw from Johnson College must:

- inform the Vice President of Academic Affairs in writing
- meet with the Registrar and the Director of Financial Aid
- inform the Coordinator of On-Campus Housing where applicable
- complete an Official Withdrawal form available from the Registrar's Office.

Upon withdrawal, passing grades will be recorded on the transcript as a WP (Withdrew Passing) and failing grades will be recorded as a WF (Withdrew Failing).

Student Complaint/Grievance Procedure

Schools accredited by the Accrediting Commission of Career Schools and Colleges of Technology must have a procedure and operational plan for handling student complaints. If a student does not feel that the school has adequately addressed a complaint or concern, the student may consider contacting the Accrediting Commission. All complaints considered by the Commission must be in written form, with permission from the complainant(s) for the Commission to forward a copy of the complaint to the school for a response. The complainant(s) will be kept informed as to the status of the complaint as well as the final resolution by the Commission. Inquiries may be directed to the Accrediting Commission of Career Schools and Colleges of Technology, 2101 Wilson Blvd./Suite 302, Arlington, VA 22201, (703)247-4212. A copy of the Commission's Complaint Form is available at the College and may be obtained by contacting the Vice President of Operations and Administration.

Re-instatement

Students who are dismissed for academic reasons may seek re-instatement. The decision for re-instatement is made jointly by the Director of Enrollment Management, Department Chairperson, and the Vice President of Academic Affairs.

Students who are accepted for re-instatement will be enrolled on a probationary status and may be required to take a reduced academic schedule and/or participate in the SUCCESS Program. Re-instated students who have received financial aid should contact the Director of Financial Aid to determine eligibility for continued financial assistance. Individual program re-instatement criteria may be found in individual program handbooks.

Course Audits

Students may audit a course for personal enrichment. They may attend classes and participate in lectures and laboratory activities but are not required to complete assignments or take tests. Students who elect to audit a course will receive a grade of "AU" on their transcript which indicates that no grade or credit has been given for the course. The charge for audited courses is the same as for credit courses.

Practicum/Internship/Cooperative Education Experience

Johnson College offers a practicum/internship/cooperative education experience that integrates technical studies with supervised work experience. Students may be employed by industry, business or government organizations for a specific period of time in positions related to their technical fields and must meet all requirements for these experiences. Additional information about this program is available in the Career Services Office.

STUDENT SERVICES

Student Information Handbook

The Johnson College **Student Information Handbook** is accessible through the Johnson College website (www.johnson.edu) to all students to explain assistance, regulations, organizations, scheduling, faculty, facilities, and curriculum. It is the responsibility of the student to read the Handbook and to comply with all regulations.

Facilities

Library/Resource Center

The Library/Resource Center at Johnson College is a technology-based library offering on-line computer services in addition to more than 4,500 volumes, 130 current periodical subscriptions and 300 items in the video collection. The Library/Resource Center is a participating member of the Northeastern Pennsylvania Library Network (NPLN). The NPLN provides users with access to a collection of more than one and a half million volumes through its on-line catalogs.

Computer Labs

Students may use two computer labs that provide Internet access, a laser printer and a scanner. Computers are equipped with Windows, Word, Excel, Access, Power Point, and tutorial software for math, English, and reading/study skills. Both computer labs are located in the Moffat Building. Computers are also available in the Library/Resource Center for student use. Student lab assistants are available to provide help to students.

Fitness Center

The Moffat Building has a fitness/training area available for student use featuring equipment such as Nautilus, Gravitron, treadmills, stair climbers, exercise bikes and free weights. Hours of operation are contingent upon the facility's availability.

Cafeteria

Located in the Moffat Building, the cafeteria is professionally staffed and provides breakfast, lunch, and snacks. The cafeteria is generally open Monday through Friday from 7:00 a.m. to 2:00 p.m. Vending machines are available for after-hours snacks and beverages.

Bookstore

The College bookstore is located in the Moffat Building and is open weekdays from 8:30 a.m. to 3:30 p.m. at the beginning of each semester for approximately two weeks. The balance of the semester the bookstore is open on a limited basis, generally from 10:00 a.m. to 2:00 p.m., with special hours established for evening students. Students may

purchase textbooks, supplies, and instructional/learning aids as well as a variety of clothing and novelty items.

Student Apartment Housing

Limited on-campus student housing is available to incoming freshmen on a first-come, first-served basis and is assured for freshman year only. Any unoccupied units are then made available to returning second-year students. The apartment-type units are modestly furnished with ample storage and closet space. The first floor has a kitchen and living area and the second floor has a bedroom and bathroom. Students sign a lease prior to occupancy. The apartments are supervised by the On-Campus Housing Coordinator who resides on-campus and conducts daily rounds of the student apartment housing. The apartments are also monitored by closed circuit security cameras. Additional information may be obtained by contacting the Admissions Office or the On-Campus Housing Coordinator. Pennsylvania law requires students residing in campus housing to submit documentation of immunization against meningococcal disease (meningitis) before being permitted to live on campus. Apartments accommodate two students; a handicapped accessible unit is also available.

National Honor Societies

Chi Alpha Epsilon

Chi Alpha Epsilon is a national honor society that was chartered at Johnson College in 2002. Full-time students who enter the College through a variety of programs and achieve a Grade Point Average (GPA) of 3.00 for two consecutive semesters will be considered for induction into Chi Alpha Epsilon. Eligible programs include Act 101, the SUCCESS Program, and the Summer Preparatory Program. Students who utilize the services of the Student Support Services Office will also be considered for induction. Chi Alpha Epsilon promotes continued high academic standards, honors academic excellence and offers additional opportunities for recognition throughout the students' college years as they continue to excel in their course work. New members are inducted during a formal ceremony.

Alpha Beta Kappa

Alpha Beta Kappa is a national honor society open to students who attain a cumulative GPA of 3.50 or higher by the beginning of their last semester at Johnson College and who have participated in a student activity during their time on campus. Eligible activities include Student Government, Social Force, athletics, and peer tutoring. Students are inducted into the Omega of Pennsylvania chapter during a ceremony prior to graduation.

Clubs and Organizations

Student Government Association

The Student Government Association provides students with an opportunity to develop leadership skills while contributing constructively to Johnson College and the student body. Generally, student representatives are selected from each technical or clinical program and must maintain a 2.00 cumulative GPA.

The goals of the Student Government Association are as follows:

- to advocate student needs and represent the student body in matters related to College policy and activities
- to promote opportunities for educational, personal, social, and cultural enrichment of all students
- to articulate educational quality and safety in the instructional programs
- to promote effective communication with all levels of the College community
- to promote Johnson College's reputation and encourage respect for the College's environment.

Social Force Club

Funded by ACT 101, the Social Force Club is a community service organization that also provides cultural and social activities for students. Members of Social Force participate in activities such as the Thanksgiving Food Drive, The Giving Tree Christmas project, the Troop Fan Mail project for U.S. military troops overseas, and other community service activities as decided by the members. Cultural opportunities have included bus trips to New York City and Hershey Park, a fall foliage ride on a Steamtown train, and a coal mine tour. Social events such as movie nights, karaoke nights, talent shows and a semi-formal dance take place throughout the year.

Social Force often works in conjunction with the Student Government Association to plan activities for students during their time on campus. Social Force meetings are usually held bi-weekly during the lunch periods. Membership is open to all students and new members are always welcome.

Social/Cultural/Recreational Activities

A variety of social, cultural, and recreational activities is available to Johnson College students. Intramural sports, social functions, holiday parties and other activities are scheduled on a regular basis as participation warrants. Activities include billiards and ping-pong tournaments, basketball, volleyball, exercise training, technical/clinical clubs, a student talent show and a semi-formal dance.

Alumni Association

The Johnson College Alumni Association organizes and sponsors various educational, fundraising, and social activities that are beneficial to both graduates and the current student body.

Athletics

Johnson College offers four inter-collegiate sports to students: basketball, golf, bowling, and cross-country. The College is a member of the highly competitive Eastern Pennsylvania Collegiate Conference (EPCC) and the Johnson College Jaguars compete against institutions such as various campuses of Penn State University, Penn College of Technology, Central Penn College and Luzerne County Community College.

Career Services

The Career Services Office provides assistance for students seeking part-time employment during the school year, summer employment, and full-time employment following graduation. Career Services offers guidance on career choices as well as assistance with resume preparation, job search strategies and interviewing skills. Career opportunities are provided through semi-annual on-campus career/job fairs and access to professional organizations and associations. Employer information files and student resume files are maintained in the Career Services Office along with information on employment opportunities and salary levels.

Tech Clubs

Several technical programs have student clubs that promote campus and community awareness of the program as well as sponsor activities of technical interest to students in the program. Membership is open to all students in the program.

Student Support Services**Counseling**

Johnson College's counseling program assists students with academic and personal problems. Counselors work with students who may need support or assistance with a particular issue, including personal relationships, anger, fear, school-related problems, drug and alcohol abuse, sexual and/or domestic abuse, career exploration, etc. Faculty or staff members may refer students to the counseling program or students may self-refer. Two professional counselors are available to students who wish to schedule appointments or just "drop by" as the need dictates. Counseling services are confidential and are offered to students at no additional charge.

Perkins/Act 101

The Perkins/Act 101 programs are federally and state-funded grants, respectively, that enable Johnson College to provide support services to students who qualify within the

programs' guidelines. These programs include a comprehensive system of evaluation, counseling, mentoring, tutorial support, and cultural enrichment.

Mentoring

Johnson College has a support system for all students known as the Student Mentoring Program. At the beginning of the freshman year, each student is assigned a faculty member (from a different technical/clinical area than his/her major) or other staff member who meets with the student, initially in a group setting. The mentor serves as a point of contact on progress and puts the student in contact with counselors or tutoring staff who may prove helpful in assuring progress. Mentors are available to meet with students throughout the semester at the student's request. Mentoring sessions are confidential. Students are encouraged to discuss any issues that may be impeding them academically, personally, financially, etc., so that appropriate assistance can be found.

Tutoring

Peer tutors are available upon student request or faculty/staff referral. Based upon the needs of the student, a tutoring schedule can be daily, weekly, or on an as-needed basis. Confidentiality is of the utmost importance and peer tutors are fully aware of this aspect of their position. Professional tutoring is also available to students.

Learning Support

Johnson College offers confidential learning support accommodations to students with documented learning disabilities or Attention Deficit Hyperactivity Disorder (ADHD). Documentation should include current assessment data and provide information about the functional limitations imposed by the disability as well as the academic needs. This information should be sent to the Office of Student Support Services. At the student's request, appropriate and reasonable accommodations will be provided. Professional testing may be arranged for students who have not been tested within the previous four years. The cost of this testing may be covered by the student's insurance and/or the Office of Vocational Rehabilitation.

Educational Resources

Students will be provided with a list of resources available through the Student Support Services Office at the beginning of the academic year. Students may borrow from a library of audio tapes, video tapes, and books on such subjects as anger management, self-esteem, how to study, how to take exams, how to take notes, time management, math, English, study skills, etc. The students may also borrow tape recorders, dictionaries, hand-held spell-checkers, calculators, and relaxation tapes.

SUCCESS Program

The SUCCESS Program is a tool offered to students who are motivated to achieve academic and personal success at the college level. The SUCCESS Program is designed

to assist students with the transition to college-level academics and to help them to achieve their goals. Students are referred to the program through the admissions process, by a faculty or staff member, by the Vice-President of Academic Affairs, or by self-referral.

The SUCCESS Program offers tutoring, counseling, and mentoring services to students. Additional information about this program is available in the Student Support Services office.

Student Responsibilities, Conduct, and Dress

Johnson College students are responsible for reading and abiding by all rules and policies described in this **Catalog** and the **Student Information Handbook**. Students are personally responsible for following policies and procedures as they affect their academic progress, financial obligations, relationships with College authorities, and eligibility for graduation.

Johnson College students are expected at all times to conduct themselves in a responsible manner that conforms to generally accepted standards of adult behavior. Students should show courtesy and respect for other students and the faculty as well as the administrative and support staff of the College. Students also must accept the need for various College regulations and comply with the directives of those authorized to enforce the regulations. Failure to conduct themselves in an acceptable manner may subject students to penalties such as suspension, expulsion or arrest.

Johnson College students are also expected to exercise good judgment in selecting attire that is appropriate to an educational environment and to abide by all College policies regarding the wearing and use of safety equipment and apparel.

When in doubt about any College directive, students should seek advice from their faculty advisor, assigned mentor or appropriate office within the College.

Sexual and Other Unlawful Harassment

Johnson College is committed to providing an educational environment that is free of discrimination and unlawful harassment. Actions, words, jokes, or comments based on an individual's sex, race, ethnicity, age, religion, or any other legally protected characteristic will not be tolerated. As an example, sexual harassment is a form of misconduct that is demeaning to another person or undermines the integrity of the relationship, and is strictly prohibited. Any staff member, student, or supervisor who becomes aware of possible sexual or other unlawful harassment should promptly advise the President of the College.

Anyone engaging in sexual or other unlawful harassment will be subject to appropriate disciplinary action, up to and including termination of employment or termination from his/her program of education.

PROGRAM OBJECTIVES AND EMPLOYMENT OPPORTUNITIES

Descriptions of programs on the following pages include a sequence of courses for each program. The sequence is designed to satisfy prerequisite requirements, to ensure access to courses that are not available every semester, and to ensure the completion of course requirements. Students are encouraged to adhere to the sequence as much as possible in order to complete the program in the traditional two-year time frame.

Johnson College recognizes that not all students are able to progress through the course sequence as presented. Students who are not able to adhere to the sequence are encouraged to consult with their faculty advisors in order to ensure completion of graduation requirements.

Architectural Drafting & Design Technology (AAS)

The Architectural Drafting & Design Technology program prepares students as entry-level technicians in manual and computer-aided drafting for residential and commercial construction. Complete layout, design, detailing, and estimating are provided with drafting instruction.

Graduates work as detailers, drafters, design aides, construction estimators, architects' representatives, and computer-assisted design (CAD) operators.

Typical employers in the architectural career field are residential, commercial, and industrial contractors and land developers; architectural, civil, and structural engineering companies; modular and mobile home builders; and government agencies.

Architectural Drafting & Design Technology Major Courses (48 Credits)

ADT 111	Introduction to Drafting	4
ADT 112	Site Plans and Details	4
ADT 113	Residential Planning	4
ADT 114	Introduction to Computer Assisted Drafting (CAD)	4
ADT 115	Residential Working Drawings	4
ADT 116	Residential Building Systems	4
ADT 211	Computer Assisted Drafting (CAD)	4
ADT 212	Commercial Drafting	4
ADT 213	Codes and Ordinances	4
ADT 214	Specifications I	4
ADT 215	Specifications II	4
ADT 216	Applied Architectural Drafting OR ADT 217 OR 218	4
ADT 217	Internship	4
ADT 218	Co-op Educational Experience	4

General Education - Core (18 Credits)

CPT 101	Microcomputer I	3
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
MAT 201	College Algebra II & Trigonometry	3
ENG 201	Communications	3
BUS 101	Introduction to Business	3

Electives (5/6 Credits) 5/6

Refer to semester offerings in Course Booklet

Minimum Credits to Graduate **71**

Architectural Drafting & Design Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
ADT 111	Introduction to Drafting	4
ADT 112	Site Plans and Details	4
ADT 113	Residential Planning	4
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
BUS 101	Introduction to Business	3
		21
Semester 2		
ADT 114	Introduction to Computer Assisted Drafting (CAD)	4
ADT 115	Residential Working Drawings	4
ADT 116	Residential Building Systems	4
MAT 101	College Algebra I	3
	Elective	2/3
		17/18
First Year Totals		38/39
Semester 3		
ADT 211	Computer Assisted Drafting (CAD)	4
ADT 212	Commercial Drafting	4
ADT 213	Codes and Ordinances	4
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
	Elective	2/3
		20/21
Semester 4		
ADT 214	Specifications I	4
ADT 215	Specifications II	4
ADT 216	Applied Architectural Drafting OR ADT 217 OR 218	4
ADT 217	Internship	4
ADT 218	Co-op Educational Experience	4
		12
Second Year Totals		32/33
Program Totals		71/72
Minimum Credits to Graduate		71

Automotive Technology (AAS)

The Automotive Technology program prepares students as entry-level technicians in the many phases of the automobile, truck, and diesel industries.

Graduates work as specialists in tune-ups, brake systems, transmissions, alignments, and repairs; representatives in claims, sales, and service; and truck/fleet maintenance technicians.

Typical employers in the automotive career are automotive, truck, farm, and earth-moving equipment dealerships; trucking, power generation, and construction companies; automotive service centers; engine repair/machine shops; automotive equipment distributors; independent service garages; automotive parts manufacturers; sales representation; and auto insurance companies.

Automotive Technology Major Courses (48 Credits)

AUT 141	Introduction to Automotive Service Field/ New and Used Vehicle Preparation	4
AUT 142	Hydraulic Brake Systems	4
AUT 143	Steering and Suspension	4
AUT 144	Electrical & Electronic Systems	4
AUT 145	Engine Performance & Emissions	4
AUT 146	Gasoline Fuel Injection Systems & Computers	4
AUT 241	Engine Overhaul	4
AUT 242	Diesel Fuel Injection	4
AUT 243	Heating & Air Conditioning	4
AUT 244	Automatic Transmissions	4
AUT 245	Manual Transmissions & Differentials	4
AUT 247	Internship	4
AUT 248	Co-op Educational Experience	4
AUT 249	Automotive Electrical Technology OR AUT 247 OR 248	4

General Education Core (21 Credits)

CPT 101	Microcomputer I	3
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
BUS 101	Introduction to Business	3
ENG 201	Communications	3
IET 101	Introduction to Automotive and Diesel Electronics	3
MAT 201	College Algebra II and Trigonometry	3

Electives (5/6 Credits) 5/6

Refer to semester offerings in Course Booklet

Minimum Credits to Graduate **74**

**Automotive Technology
Associate in Applied Science (AAS)
Semester Program Outline**

		Credits
Semester 1		
AUT 141	Introduction to Auto Service Field/ New and Used Vehicle Preparation	4
AUT 142	Hydraulic Brake Systems	4
AUT 143	Steering & Suspension	4
CPT 101	Microcomputer I	3
IET 101	Introduction to Automotive and Diesel Electronics	3
BUS 101	Introduction to Business	3
		21
Semester 2		
AUT 144	Electrical & Electronic Systems	4
AUT 145	Engine Performance & Emissions	4
AUT 146	Gasoline Fuel Injection Systems & Computers	4
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
	Elective	2/3
		20/21
First Year Totals		41/42
Semester 3		
AUT 241	Engine Overhaul	4
AUT 242	Diesel Fuel Injection	4
AUT 243	Heating & Air Conditioning	4
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
	Elective	2/3
		20/21
Semester 4		
AUT 244	Automatic Transmissions	4
AUT 245	Manual Transmissions & Differentials	4
AUT 247	Internship	4
AUT 248	Co-op Educational Experience	4
AUT 249	Automotive Electrical Technology OR AUT 247 OR 248	4
		12
Second Year Totals		32/33
Program Totals		74/75
Minimum Credits to Graduate		74

Biomedical Equipment Technology

Associate in Applied Science (AAS)

Program Objective

The Biomedical Equipment Technology program prepares students as entry-level technicians for the operation, inspection, installation, calibration, repair, maintenance and safety of patient-care and non-patient care equipment.

Career Opportunities

Graduates work as technicians and sales representatives in the field of electronic instrumentation and computer repair. Typical employers in the biomedical field are hospitals; medical centers; contract maintenance firms; dental, medical, and optical facilities; computer, electronic and medical instrumentation manufacturers; and electronic media and telecommunications companies.

Recommended Courses

Recommended courses in high school include Algebra, Chemistry or Physics, and math courses at a level of Algebra II or higher.

Special Admissions Requirements

A minimal Scholastic Aptitude Test (SAT) score of 750 for combined math and verbal or a minimal American College Test (ACT) of 15 is required for admission. The new writing component of the SAT will be reviewed by the Admissions Office and may assist in determining placement and/or admission to the College.

Special Enrollment Requirements

Prior to the start of the first semester, students must provide proof of a criminal background check and hepatitis B vaccination. Proof of a PPD two-step testing (TB test) is required prior to the start of the student's second year.

Special Fees

In addition to tuition and fees, the purchase of tools and supplies required for the program is the responsibility of the student.

Retention

Throughout the program of study, students are required to maintain a cumulative Grade Point Average (GPA) of at least 2.00.

Internship/Cooperative Education Experience

A five-week internship or cooperative education experience at an approved site must be completed in the last semester of the second year. Students must satisfy the internship

requirements of both Johnson College and the internship provider as a condition of graduation. Students must have a cumulative GPA of 2.00 to qualify for an internship.

Some internship sites may require proof of current health care coverage, a criminal background check, and/or a drug test. Internship sites may bar students from an internship if a criminal record exists or a drug test has a positive result. Costs for travel to and from an internship site are the responsibility of the student.

Program Goals

- Graduates will possess the skills necessary to obtain an entry-level Biomedical Technician position.
- Graduates will understand the importance of professional behavior and life-long learning, and will meet the challenges of continued technological growth within the Biomedical Technology profession.
- Graduates will possess the appropriate skills needed for decision-making and critical thinking, enabling them to make professional advancement within the Biomedical Technology field.

Biomedical Equipment Technology (AAS) Program Outline

Biomedical Equipment Technology Major Courses (48 Credits)		
EET 101	DC Electricity and Instrumentation	4
EET 102	Alternating Current and Passive Devices	4
EET 103	Semiconductor Principles & Applications I	4
EET 104	Semiconductor Principles & Applications II	4
EET 105	Digital Electronics I	4
EET 106	Digital Electronics II	4
BET 201	Medical Equipment Standards and Testing	4
BET 202	Introduction to Medical Telecommunications & Networking	4
BET 203	Physiological Monitoring Devices	4
BET 204	Life Support Systems	4
BET 205	Specialized Medical Systems	4
BET 207	Internship I OR BET 208	4
BET 208	Co-op Educational Experience	4
General Education Core (24 Credits)		
CPT 101	Microcomputer I	3
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
CHE 101	Chemistry I	3
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
BUS 101	Introduction to Business	3
PHA 201	Physiology & Anatomy	3
Electives (2/3 Credits)		
Refer to semester offerings in Course Booklet		
Minimum Credits to Graduate		74

**Biomedical Equipment Technology
Associate in Applied Science (AAS)
Semester Program Outline**

		Credits
Semester 1		
EET 101	DC Electricity and Instrumentation	4
EET 102	Alternating Current and Passive Devices	4
EET 103	Semiconductors Principles & Applications I	4
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
CHE 101	Chemistry I	3
		21
Semester 2		
EET 104	Semiconductors Principles & Applications II	4
EET 105	Digital Electronics I	4
EET 106	Digital Electronics II	4
CPT 101	Microcomputer I	3
BUS 101	Introduction to Business	3
	Elective	2/3
		20/21
First Year Totals		41/42
Semester 3		
BET 201	Medical Equipment Standards and Testing	4
BET 202	Introduction to Medical Telecommunications & Networking	4
BET 203	Physiological Monitoring Devices	4
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
	Elective (if required)	
		18
Semester 4		
BET 204	Life Support Systems	4
BET 205	Specialized Medical Systems	4
BET 207	Internship OR BET 208	4
BET 208	Co-op Educational Experience	4
PHA 201	Physiology & Anatomy	3
		15
Second Year Totals		33
Program Totals		74/75
Minimum Credits to Graduate		74

Carpentry & Cabinetmaking Technology (AAS)

The Carpentry & Cabinetmaking Technology program prepares students as entry-level trades people in layout, estimation, construction, erection of residential construction including installation of trim, furniture, stairs, and cabinets. Leadership and management skills are stressed. Graduates work as rough and finish carpenters, cabinetmakers, mill workers, building product representatives, and custom woodworkers.

Typical employers in the carpentry and cabinetmaking career field are residential, commercial, and industrial construction companies; remodeling contractors; cabinet and showcase manufacturers; mill-work companies and lumber yards; wholesale and retail building product suppliers; modular home manufacturers; large institutional, business, and industrial complexes; and architectural engineering firms.

Students work with industry standard tools and equipment such as table saws, jointers, power tools, hand tools, pneumatic nailers, and transit.

Carpentry and Cabinetmaking Technology Major Courses (48 Credits)

CCM 161	Woodworking Tools & Machines I	4
CCM 162	Woodworking Tools & Machines II	4
CCM 163	Kitchen & Bath Design Standards	4
CCM 167	Cabinet and Component Construction	4
CCM 166	Interior Finishes	4
CCM 168	Exterior Finishes	4
CCM 261	Site Preparation & Layout	4
CCM 262	Stairs	4
CCM 263	Floor/Wall Framing Principles	4
CCM 264	Roof Framing Principles I	4
CCM 265	Roof Framing Principles II	4
CCM 266	Applied Industrial Practices OR CCM 267 OR 268	4
CCM 267	Internship	4
CCM 268	Co-op Educational Experience	4

General Education Core (18 Credits)

CPT 101	Microcomputer I	3
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
BUS 101	Introduction to Business	3
Electives (2/3 Credits)		2/3

Refer to semester offerings in Course Booklet

Minimum Credits to Graduate 68

Carpentry & Cabinetmaking Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
CCM 161	Woodworking Tools & Machines I	4
CCM 162	Woodworking Tools & Machines II	4
CCM 163	Kitchen & Bath Design Standards	4
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
		21
Semester 2		
CCM 167	Cabinet and Component Construction	4
CCM 166	Interior Finishes	4
CCM 168	Exterior Finishes	4
MAT 101	College Algebra I	3
	Elective	2/3
		17/18
First Year Totals		38/39
Semester 3		
CCM 261	Site Preparation & Layout	4
CCM 262	Stairs	4
CCM 263	Floor/Wall Framing Principles	4
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
		18
Semester 4		
CCM 264	Roof Framing Principles I	4
CCM 265	Roof Framing Principles II	4
CCM 266	Applied Industrial Practices OR CCM 267 OR 268	4
CCM 267	Internship	4
CCM 268	Co-op Educational Experience	4
		12
Second Year Totals		30
Program Totals		68/69
Minimum Credits to Graduate		68

Computer Information Technology (AS)

The Computer Information Technology Program prepares students as entry-level technicians for the maintenance, repair, and troubleshooting of the hardware and software used in today's local and wide area computer networking and information systems.

Graduates work as enterprise technicians, information technology technicians, system managers, network project managers, and system analysts.

Typical employers are any business or industry using information technology today. Some examples of these are banks, hospitals, educational institutions, government facilities, mail order facilities, retail chains, and manufacturing facilities.

Students work with current industry standard computers, servers, hubs, switches, various testing devices, and terminating equipment. Students also use industry standard programs such as Lynx, Novell, Windows NT and other Microsoft products.

Computer Information Major Courses (48 Credits)

CIT 151	Computer Architecture	4
CIT 152	Computer OS and Networking	4
CIT 153	Network Principles and Applications	4
CIT 154	TCP/IP Configuration	4
CIT 155	LAN Design, Configuration & Administration	4
CIT 156	LAN Service and Support	4
CIT 251	Networking Systems	4
CIT 252	WAN Principles and Applications	4
CIT 253	Servers: Selection, Configuration and Support	4
CIT 254	WAN and Telecommunications Applications	4
CIT 255	Enterprise Application Technologies	4
CIT 256	Internetworking Applications OR CIT 257 OR 258	4
CIT 257	Internship	4
CIT 258	Co-op Educational Experience	4

General Education Core (21 Credits)

ENG 101	English Composition I	3
PRG 101	Programming for the Enterprise	3
MAT 101	College Algebra I	3
BUS 101	Introduction to Business	3
MAT 201	College Algebra II & Trigonometry	3
ENG 201	Communications	3
DAT 201	Database: Principles & Applications	3

Electives (2/3 Credits) 2/3

Refer to semester offerings in Course Booklet

Minimum Credits to Graduate **71**

**Computer Information Technology
Associate in Science (AS)
Semester Program Outline**

		Credits
Semester 1		
CIT 151	Computer Architecture	4
CIT 152	Computer OS and Networking	4
CIT 153	Network Principles and Applications	4
ENG 101	English Composition I	3
PRG 101	Programming for the Enterprise	3
MAT 101	College Algebra I	3
		21
Semester 2		
CIT 154	TCP/IP Configuration	4
CIT 155	LAN Design, Configuration & Administration	4
CIT 156	LAN Service and Support	4
BUS 101	Introduction to Business	3
	Elective	2/3
		17/18
First Year Totals		38/39
Semester 3		
CIT 251	Networking Systems	4
CIT 252	WAN Principles and Applications	4
CIT 253	Servers: Selection, Configuration and Support	4
MAT 201	College Algebra II & Trigonometry	3
ENG 201	Communications	3
DAT 201	Database: Principles & Applications	3
		21
Semester 4		
CIT 254	WAN and Telecommunication Applications	4
CIT 255	Enterprise Application Technologies	4
CIT 256	Internetworking Applications OR CIT 257 OR 258	4
CIT 257	Internship	4
CIT 258	Co-op Educational Experience	4
		12
Second Year Totals		33
Program Totals		71/72
Minimum Credits to Graduate		71

Diesel Truck Technology (AAS)

The Diesel Truck Technology program prepares students as entry-level technicians with the latest information on diagnosis, repair procedures, preventive maintenance, and necessary safety applications in diesel technology. The course prepares students to take the voluntary mechanic certification test (ASE) in heavy-duty trucks. Graduates work as tune-up, brakes, transmission and refrigeration technicians; diesel truck repair and fleet maintenance technicians; service writing technicians; and sales and service representatives.

Typical employers of the diesel truck technicians are truck, farm, and earth-moving equipment dealerships; trucking, power generation, and construction companies; truck service centers; engine repair/machine shops; truck equipment distributors; independent service garages; automotive parts manufacturers; sales representation; and insurance companies.

Diesel Truck Technology Major Courses (48 Credits)

DTT 141	Introduction to Truck/Trailer Service Field	4
DTT 142	Air Brake Systems	4
DTT 143	Steering & Suspension	4
DTT 144	Electrical & Electronic Systems	4
DTT 145	Diesel Fuel Injection Systems	4
DTT 146	Diesel Engine Overhaul	4
DTT 241	Diesel Engine Performance and Tune-up Procedures	4
DTT 242	Manual Transmission Overhaul	4
DTT 243	Differentials and Drive Line	4
DTT 244	Automatic Transmission Diagnostics, Basic Hydraulics	4
DTT 245	Heating, Air Conditioning and Refrigeration	4
DTT 246	Applied Diesel Truck Principles and Applications OR DTT 247 OR 248	4
DTT 247	Internship	4
DTT 248	Co-op Educational Experience	4
General Education Core (21 Credits)		
CPT 101	Microcomputer I	3
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
BUS 101	Introduction to Business	3
IET 101	Introduction to Automotive and Diesel Electronics	3
Electives (5/6 Credits)		5/6
Refer to semester offerings in Course Booklet		

Minimum Credits to Graduate 74

**Diesel Truck Technology
Associate in Applied Science (AAS)
Semester Program Outline**

		Credits
Semester 1		
DTT 141	Introduction to Truck/Trailer Service Field	4
DTT 142	Air Brake Systems	4
DTT 143	Steering & Suspension	4
CPT 101	Microcomputer I	3
IET 101	Introduction to Automotive and Diesel Electronics	3
BUS 101	Introduction to Business	3
		21
Semester 2		
DTT 144	Electrical & Electronic Systems	4
DTT 145	Diesel Fuel Injection Systems	4
DTT 146	Diesel Engine Overhaul	4
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
	Elective	2/3
		20/21
First Year Totals		41/42
Semester 3		
DTT 241	Diesel Engine Performance and Tune-up Procedures	4
DTT 242	Manual Transmission Overhaul	4
DTT 243	Differentials and Drive Line	4
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
	Elective	2/3
		20/21
Semester 4		
DTT 244	Automatic Transmission Diagnostics, Basic Hydraulics	4
DTT 245	Heating, Air Conditioning and Refrigeration	4
DTT 246	Applied Diesel Truck Principles and Applications	4
	OR DTT 247 OR 248	4
DTT 247	Internship	4
DTT 248	Co-op Educational Experience	4
		12
Second Year Totals		32/33
Program Totals		74/75
Minimum Credits to Graduate		74

Distribution & Supply Logistics Technology (AAS)

The Distribution & Supply Logistics Technology program provides students with the skills needed for entry-level positions in the field of transportation logistics management. Graduates may work in a number of areas such as transportation management, route planning, physical distribution management, transportation marketing, customer service, purchasing, quality control, and operations management. Typical employers include warehousing and trucking facilities, large manufacturing facilities, and retail and wholesale distributors.

Distribution & Supply Logistics Major Courses (43 Credits)

LOG 181	Introduction to Logistics	3
LOG 182	Total Quality Management	3
LOG 183	Transportation Management	3
LOG 184	Introduction to Materials Handling	3
MNG 185	Principles of Management	3
LOG 281	Warehousing and Distribution	3
LOG 282	Production and Inventory Control	3
ECO 201	Contemporary Issues in Economics	3
BSL 201	Business Law	3
LOG 284	International Logistics	3
MNG 284	Management and Supervision	3
BUS 101	Introduction to Business	3
ACC 101	Accounting I	3
LOG 287	Internship	4

General Education Courses (21 Credits)

ECO 101	Introduction to Economics	3
MAT 121	Introduction to Statistics	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 201	Communications	3
SBS 201	Social/Behavioral Science	3
HMN 101	Introduction to Humanities	3

Minimum Credits to Graduate 64

Distribution & Supply Logistics Technology
Associate in Applied Science (AAS)
Semester Program Outline

Semester 1	Credits
LOG 181 Introduction to Logistics	3
BUS 101 Introduction to Business	3
ENG 101 English Composition I	3
MAT 121 Introduction to Statistics	3
CPT 101 Microcomputer I	3
	15
Semester 2	
LOG 182 Total Quality Management	3
LOG 183 Transportation Management	3
LOG 184 Introduction to Materials Handling	3
MNG 185 Principles of Management	3
ECO 101 Introduction to Economics	3
ACC 101 Accounting I	3
	18
First Year Totals	33
Semester 3	
LOG 281 Warehousing and Distribution	3
LOG 282 Production and Inventory Control	3
ENG 201 Communications	3
HMN 101 Introduction to Humanities	3
BSL 201 Business Law	3
	15
Semester 4	
ECO 201 Contemporary Issues in Economics	3
MNG 284 Management and Supervision	3
SBS 201 Social/Behavioral Science	3
LOG 284 International Logistics	3
LOG 287 Internship	4
	16
Second Year Totals	31
Program Totals	64
Minimum Credits to Graduate	64

Electrical Construction & Maintenance Technology (AAS)

Electrical Construction & Maintenance Technology is an electrical program that prepares students as entry-level technicians. This program incorporates hands-on experience, safe work practices, proper workmanship skills, troubleshooting skills, and theory. Students receive instruction in basic AC/DC circuit theory, blue print reading, residential, commercial and industrial electrical construction theory and practices according to the National Electrical Code, motor control fundamentals, electrical test procedures, single and three phase power systems, programmable logic controllers, industrial maintenance procedures, and industrial mechanics.

Graduates work in the following areas: residential electrical construction, commercial electrical construction, industrial electrical construction, industrial plant maintenance and institutional maintenance.

Typical employers are industrial manufacturing and commercial facilities, construction firms, maintenance companies, electrical sales companies and electrical utilities.

Electrical Construction & Maintenance Technology Major Courses (48 Credits)

ECM 101	Fundamentals of Electricity	4
ECM 102	Introduction to Residential Wiring	4
ECM 103	Principles & Applied Practices of Residential Wiring	4
ECM 104	Advanced Residential Circuit Installation	4
ECM 105	Service Installation & Troubleshooting	4
ECM 106	Commercial Wiring	4
ECM 201	Industrial Motor Control	4
ECM 202	Advanced Motor Control Circuits	4
ECM 203	Programmable Logic Controllers	4
ECM 204	Industrial Maintenance I	4
ECM 205	Industrial Maintenance II	4
ECM 206	Applied Practice and Special Topics OR ECM 207 OR 208	4
ECM 207	Internship	4
ECM 208	Co-op Educational Experience	4

General Education Core (18 Credits)

CPT 101	Microcomputer I	3
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
BUS 101	Introduction to Business	3
Electives (2/3 Credits)		2/3

Refer to semester offerings in Course Booklet.

Minimum Credits to Graduate 68

Electrical Construction & Maintenance Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
ECM 101	Fundamentals of Electricity	4
ECM 102	Introduction to Residential Wiring	4
ECM 103	Principles & Applied Practices of Residential Wiring	4
CPT 101	Microcomputer I	3
BUS 101	Introduction to Business	3
		18
Semester 2		
ECM 104	Advanced Residential Circuit Installation	4
ECM 105	Service Installation & Troubleshooting	4
ECM 106	Commercial Wiring	4
ENG 101	English Composition I	3
MAT 101	College Algebra I	3
		18
First Year Totals		36
Semester 3		
ECM 201	Industrial Motor Control	4
ECM 202	Advanced Motor Control Circuits	4
ECM 203	Programmable Logic Controllers	4
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
	Elective	2/3
		20/21
Semester 4		
ECM 204	Industrial Maintenance I	4
ECM 205	Industrial Maintenance II	4
ECM 206	Applied Practice and Special Topics OR ECM 207 OR 208	4
ECM 207	Internship	4
ECM 208	Co-op Educational Experience	4
		12
Second Year Totals		32/33
Program Totals		68/69
Minimum Credits to Graduate		68

Electronic Technology (AAS)

The Electronic Technology program prepares graduates as entry-level technicians. Students will become proficient in the theoretical and practical applications associated with electronic instrumentation and controls, and electrical machinery. They learn and understand the physics of electricity and how to apply those principles in industry.

Graduates work as technicians in electro-optics, testing, field service, instrumentation, and maintenance; engineering aides; and sales and service representatives.

Typical employers in the electronic career are machine, tool, and instrumentation manufacturers; electronic service companies; communication industries; electronic media; and electronic sales.

Electronic Technology Major Courses (48 Credits)

EET 101	DC Electricity and Instrumentation	4
EET 102	Alternating Current and Passive Devices	4
EET 103	Semiconductors Principles & Applications I	4
EET 104	Semiconductors Principles & Applications II	4
EET 105	Digital Electronics I	4
EET 106	Digital Electronics II	4
EET 201	Communication Electronics I	4
EET 202	Communication Electronics II	4
EET 203	Industrial Electronics	4
EET 204	Programmable Logic Controllers	4
EET 205	Introduction to Robotics	4
EET 206	Applied Electronics Principles & Applications	4
	OR EET 207 OR 208	4
EET 207	Internship	4
EET 208	Co-op Educational Experience	4

General Education Core (18 Credits)

CPT 101	Microcomputer I	3
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
BUS 101	Introduction to Business	3

Electives (2/3 Credits) 2/3

Refer to semester offerings in Course Booklet.

Minimum Credits to Graduate 68

**Electronic Technology
Associate in Applied Science (AAS)
Semester Program Outline**

		Credits
Semester 1		
EET 101	DC Electricity and Instrumentation	4
EET 102	Alternating Current and Passive Devices	4
EET 103	Semiconductors Principles & Applications I	4
MAT 101	College Algebra I	3
CPT 101	Microcomputer I	3
		18
Semester 2		
EET 104	Semiconductors Principles & Applications II	4
EET 105	Digital Electronics I	4
EET 106	Digital Electronics II	4
ENG 101	English Composition I	3
BUS 101	Introduction to Business	3
	Elective	2/3
		20/21
First Year Totals		38/39
Semester 3		
EET 201	Communication Electronics I	4
EET 202	Communication Electronics II	4
EET 203	Industrial Electronics	4
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
		18
Semester 4		
EET 204	Programmable Logic Controllers	4
EET 205	Introduction to Robotics	4
EET 206	Applied Electronics Principles & Applications OR EET 207 OR 208	4
EET 207	Internship	4
EET 208	Co-op Educational Experience	4
		12
Second Year Totals		30
Program Totals		68/69
Minimum Credits to Graduate		68

Precision Machining Technology (AAS)

The Precision Machining Technology program prepares graduates for entry-level work in the machining field. Students learn about safety, tools, equipment, conventional lathes, mills, and surface grinders, computer numerical machines (CNC), materials, heat treating, metallurgy and precision measuring instruments.

Graduates work as machinists, machine set-up technicians, maintenance machinists, computer numerical control operators, CNC set-up technicians, and quality control technicians.

Typical employers in the machine trade career include machine tool and product manufacturers; custom job shops; research laboratories; plastics industries; wholesale and retail machine tool sales; aircraft, shipbuilding, and automobile manufacturing industries.

Precision Machining Technology Major Courses (48 Credits)

PMT 121	Safety & Tool Usage	4
PMT 122	Engine Lathe Set-up & Operation	4
PMT 123	Milling Machine Set-up & Operation	4
PMT 124	Combined Machine Practices	4
PMT 125	CNC Lathe Set-up & Operation	4
PMT 126	CNC Milling Set-up & Operation	4
PMT 221	Machining Management	4
PMT 222	Computer Aided Design/Quality Control	4
PMT 223	Computer Aided Machining - Applied	4
PMT 224	Comprehensive Machining Processes	4
PMT 225	Grinding Set-ups and Operations	4
PMT 226	Applied Machining Practices OR PMT 227 OR 228	4
PMT 227	Internship	4
PMT 228	Co-op Educational Experience	4

General Education Core (18 Credits)

CPT 101	Microcomputer I	3
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
BUS 101	Introduction to Business	3

Electives (2/3 Credits) 2/3

Refer to semester offerings in Course Booklet

Minimum Credits to Graduate **68**

Precision Machining Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
PMT 121	Safety & Tool Usage	4
PMT 122	Engine Lathe Set-up & Operation	4
PMT 123	Milling Machine Set-up & Operation	4
MAT 101	College Algebra I	3
BUS 101	Introduction to Business	3
		18
Semester 2		
PMT 124	Combined Machine Practices	4
PMT 125	CNC Lathe Set-up & Operation	4
PMT 126	CNC Milling Set-up & Operation	4
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
		18
First Year Totals		36
Semester 3		
PMT 221	Machining Management	4
PMT 222	Computer Aided Design/Quality Control	4
PMT 223	Computer Aided Machining - Applied	4
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
	Elective	2/3
		20/21
Semester 4		
PMT 224	Comprehensive Machining Processes	4
PMT 225	Grinding Set-ups and Operations	4
PMT 226	Applied Machining Practices OR PMT 227 OR 228	4
PMT 227	Internship	4
PMT 228	Co-op Educational Experience	4
		12
Second Year Totals		32/33
Program Totals		68/69
Minimum Credits to Graduate		68

Radiologic Technology **Associate in Science (AS)**

Program Objective

The Radiologic Technology program prepares students for entry-level positions in a hospital or outpatient clinical setting. Graduates will be prepared to take the national license examination and become registered radiographers.

Career Opportunities

Graduates can work as technologists in hospitals, medical service centers, and outpatient imaging centers or as sales representatives for manufacturers of radiology equipment. With additional training, graduates can qualify to work as sonographers, CT and MRI technologists, radiation therapists, mammographers, DEXA scan and special procedures technologists.

Recommended Courses

Recommended courses in high school include Algebra, Biology, Chemistry, Physics, and math courses at a level of Algebra II or higher.

Special Admissions Requirements

A minimal Scholastic Aptitude Test (SAT) score of 850 for combined math and verbal or a minimal American College Test (ACT) of 17 is required for admission. The new writing component of the SAT will be reviewed by the Admissions Office and may assist in determining placement and/or admission to the College.

Applicants must take either Biology or Chemistry and attain a grade of “C” or higher. A completed Radiologic Technology questionnaire must be submitted. Application deadline is February 15, 2007.

Special Enrollment Requirements

Prior to the start of the first semester, students must provide proof of eight hours of observation in a Radiology department, hepatitis B vaccination, healthcare coverage, current Cardio-Pulmonary Resuscitation (CPR) training through either an American Heart Association Healthcare Provider or an American Red Cross Professional Rescuer, and annual proof of a PPD two-step testing (TB test).

Special Fees

In addition to tuition and fees, Radiologic Technology students will have a summer practicum fee of \$600. Students are responsible for the costs of required health exams and immunizations.

Retention

Throughout the program of study, students are required to maintain a cumulative Grade Point Average (GPA) of at least 2.00 and a minimum grade of 2.50 in each Radiologic Technology major course in order to remain in the program. Students who do not meet the GPA requirements for Radiologic Technology will be dismissed from the program. These students will have the option to transfer into another program of study providing their cumulative GPA is 2.00 or above.

Clinical Practicums

Clinical practicum rotations at approved sites must be completed. Students must satisfy the clinical requirements of both Johnson College and the clinical provider as a condition of graduation.

Clinical sites require annual child abuse clearance, criminal background checks, and drug tests. Clinical sites may bar students from clinical rotations if a criminal record exists or a drug test has a positive result. Costs for travel to and from a clinical site are the responsibility of the student. Students may refer to the **Radiologic Technology Student Handbook** for further details.

Pregnancy Policy

It is the student's choice whether or not to inform the Department Chairperson and Clinical Coordinator of a pregnancy. If a student chooses not to do so, no accommodations can be made to the student's clinical assignment or program of study. Students who choose to disclose their pregnancy are required to follow the guidelines of the Pregnancy Policy as stated in the **Radiologic Technology Student Handbook**.

Student Handbook

Radiologic Technology students are responsible for reading and abiding by all policies and procedures in the **Radiologic Technology Student Handbook**.

Programmatic Accreditation

The Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology.

Program Goals

- Graduates will possess the skills necessary to obtain an entry-level radiologic position.
- Graduates will understand the importance of professional behavior and life-long learning, and will meet the challenges of continued technological growth within the Radiologic Technology profession.

- Graduates will possess the appropriate skills needed for decision-making and critical thinking, and make professional advancement within the Radiologic Technology field.
- Graduates will meet the needs of the patient.

Radiologic Technology (AS) Program Outline

Radiologic Technology Major Courses (37 credits)		
RAD 132	Radiologic Positioning I/Lab	4
RAD 133	Radiologic Exposures & Principles I/Lab	4
RAD 134	Introduction to Radiology/Patient Care	2
PRA 131	Clinical Practicum I	1
RAD 135	Radiologic Positioning II/Lab	4
RAD 136	Radiologic Exposures & Principles II/Lab	4
RAD 137	Radiologic Nursing Procedures	1
RAD 138	Radiation Biology & Protection	3
PRA 132	Clinical Practicum II	2
PRA 231	Clinical Practicum III	1
RAD 231	Radiologic Pathology	2
RAD 232	Quality Management in Radiography	2
RAD 233	Image Analysis	2
PRA 232	Clinical Practicum IV	1
RAD 236	Advanced Medical Imaging	2
RAD 237	Registry Seminar	2
Related Courses (10 credits)		
HAP 101	Human Anatomy & Physiology I	3
HAP 102	Human Anatomy & Physiology II	3
MTR 100	Medical Terminology	1
PHY 201	Imaging Physics	3
General Education Core (21 credits)		
MAT 101	College Algebra I	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
MAT 201	College Algebra II and Trigonometry	3
ENG 201	Communications	3
BUS 101	Introduction to Business	3
PHY 101	Introductory Physics	3
Minimum Credits to Graduate		68

**Radiologic Technology
Associate in Science (AS)
Semester Program Outline**

		Credits
Semester 1		
RAD 132	Radiologic Positioning I/Lab	4
RAD 133	Radiologic Exposures & Principles I/Lab	4
RAD 134	Introduction to Radiology/Patient Care	2
HAP 101	Human Anatomy & Physiology I	3
MAT 101	College Algebra I	3
MTR 100	Medical Terminology	1
		17
Semester 2		
PRA 131	Clinical Practicum I	1
RAD 135	Radiologic Positioning II/Lab	4
RAD 136	Radiologic Exposures & Principles II/Lab	4
RAD 137	Radiologic Nursing Procedures	1
CPT 101	Microcomputer I	3
HAP 102	Human Anatomy & Physiology II	3
PHY 101	Introductory Physics	3
		19
Summer Session I		
PRA 132	Clinical Practicum II	2
		2
First Year Totals		38
Semester 3		
PRA 231	Clinical Practicum III	1
RAD 138	Radiation Biology & Protection	3
RAD 231	Radiologic Pathology	2
RAD 232	Quality Management in Radiography/Lab	2
ENG 101	English Composition I	3
MAT 201	College Algebra II and Trigonometry	3
PHY 201	Imaging Physics	3
		17
Semester 4		
PRA 232	Clinical Practicum IV	1
RAD 233	Image Analysis	2
RAD 236	Advanced Medical Imaging	2
RAD 237	Registry Seminar	2
ENG 201	Communications	3
BUS 101	Introduction to Business	3

Second Year Totals	13
Program Totals	30
Program Totals	68
Minimum Credits to Graduate	68

Veterinary Technology Associate in Science (AS)

Program Objective

The Veterinary Technology program prepares students to join an animal-care team as entry-level technicians. Technicians collect samples, perform lab tests, take radiographs, prepare the surgical suite, assist in surgery, monitor anesthesia, provide general nursing care to patients, and assume other clinical duties. Second-year students complete clinical rotations in each area of the Animal Care Center, a pet wellness center on the campus of Johnson College. The program prepares students to become Certified Veterinary Technicians (CVT) upon passing the Veterinary Technician National Exam (VTNE).

Career Opportunities

Graduates work in many areas of veterinary medicine such as small and large animal clinics, private practice, research facilities, academia, zoos, laboratories, pharmaceutical companies, and government agencies such as the United States Department of Agriculture (USDA).

Recommended Courses

Recommended courses in high school include Algebra, Biology, Chemistry, Physics, and math courses at a level of Algebra II or higher.

Special Admissions Requirements

A minimal Scholastic Aptitude Test (SAT) score of 900 for combined math and verbal or a minimal American College Test (ACT) of 18 is required for admission. The new writing component of the SAT will be reviewed by the Admissions Office and may assist in determining placement and/or admission to the College.

Applicants must take Biology and Chemistry and attain a grade of "C" or higher. A completed Veterinary Technology questionnaire must be submitted and ten hours of observation at a veterinary clinic is required. Application deadline is February 15, 2007.

Special Enrollment Requirements

Prior to the start of the first semester, students must provide proof of a tetanus inoculation. Rabies inoculation is highly recommended, however, a student may elect to sign a waiver if he/she chooses not to be vaccinated. Either a signed waiver or proof of inoculation is required.

Special Fees

In addition to tuition and fees, students are responsible for the purchase of clinic, lab, and class supplies as well as the costs of immunizations. Veterinary students will have a fee

of \$300 to cover the cost of a summer off-campus internship or cooperative education experience.

Retention

Throughout the program of study, students are required to maintain a cumulative Grade Point Average (GPA) of at least 2.00 and a minimum cumulative GPA of 2.50 in their major courses in order to remain in the program. Students who do not meet the GPA requirements for Veterinary Technology will be dismissed from the program. These students will have the option to transfer into another program of study providing their cumulative GPA is 2.00 or above. Students are also required to adhere to strict guidelines on patient neglect or cruelty.

Internship/Cooperative Education Experience

A five-week internship or cooperative education experience at an approved site must be completed after the last semester of the second year. Students must satisfy the internship requirements of both Johnson College and the internship provider as a condition of graduation.

Some internship sites may require a criminal background check and/or a drug test. Internship sites may bar students from an internship if a criminal record exists or a drug test has a positive result. Costs for travel to and from an internship site are the responsibility of the student.

Pregnancy Policy

Students should contact the Veterinary Technology Department Chair for a copy of the program's pregnancy policy.

Student Handbook

Veterinary Technology students are responsible for reading and abiding by all policies and procedures in the **Veterinary Technology Clinical Rotation Handbook**.

Programmatic Accreditation

The Veterinary Technology program is accredited by the American Veterinary Medical Association.

Program Goals

- Graduates will possess the skills necessary to obtain an entry-level Veterinary Technician position.
- Graduates will understand the importance of professional behavior and life-long learning, and will meet the challenges of continued technological growth within the Veterinary Technology profession.

- Graduates will be knowledgeable about zoonoses, public health, preventive medicine and the importance of the human-animal bond.
- Graduates will possess the appropriate skills needed for decision-making, critical thinking, and effective written and oral communication enabling them to make professional advancement within the Veterinary Technology field.
- Graduates will be ethical and abide by the Veterinary Technician Oath.

Veterinary Technology (AS) Program Outline

Veterinary Technology Major Courses (48 Credits)

VET 101	Introduction to Veterinary Technology/Clinical Mgmt.	2
VET 102	Clinical Applications for Large Animals	1
VET 102L	Clinical Applications for Large Animals Lab	2
VET 103	Clinical Applications for Small Animals	2
VET 103L	Clinical Applications for Small Animals Lab	1
VET 104	Animal Anatomy and Physiology I	3
VET 104L	Animal Anatomy and Physiology Lab I	1
VET 105	Animal Anatomy and Physiology II	3
VET 105L	Animal Anatomy and Physiology Lab II	1
VET 106	Animal Husbandry/Breeds/Nutrition	2
VET 201	Pharmacology & Anesthesia	3
VET 202	Clinical Pathology	2
VET 202L	Clinical Pathology Lab	1
VET 203	Parasitology	1
VET 203L	Parasitology Lab	1
VET 204	Clinical Rotation I	2
VET 205	Surgical Nursing I and Lab	2
VET 206	Microbiology & Immunology	2
VET 206L	Microbiology & Immunology Lab	1
VET 207	Surgical Nursing II and Lab	2
VET 208	Clinical Rotation II	2
VET 209	Veterinary Radiology	1
VET 210	Intensive Care Applications	3
VET 211	Diseases & Zoonoses	3
VET 212	Internship	4
VET 213	Co-op Educational Experience	4

General Education Core (18 Credits)

MAT 101	College Algebra I	3
ENG 101	English Composition I	3
CPT 101	Microcomputer I	3
BUS 101	Introduction to Business	3
ENG 201	Communications	3
CHE 101	Chemistry I	3

Electives (2/3 Credits)

Refer to semester offerings in Course Booklet

Minimum Credits to Graduate

68

**Veterinary Technology
Associate in Science (AS)
Semester Program Outline**

		Credits
Semester 1		
VET 101	Introduction to Veterinary Technology/Clinical Management	2
VET 102	Clinical Applications for Large Animals	1
VET 102L	Clinical Applications for Large Animals Lab	2
OR		
VET 103	Clinical Applications for Small Animals	2
VET 103L	Clinical Applications for Small Animals Lab	1
VET 104	Animal Anatomy & Physiology I	3
VET 104L	Animal Anatomy & Physiology Lab I	1
MAT 101	College Algebra I	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
		18
Semester 2		
VET 102	Clinical Applications for Large Animals	1
VET 102L	Clinical Applications for Large Animals Lab	2
OR		
VET 103	Clinical Applications for Small Animals	2
VET 103L	Clinical Applications for Small Animals Lab	1
VET 105	Animal Anatomy and Physiology II	3
VET 105L	Animal Anatomy and Physiology Lab II	1
VET 106	Animal Husbandry/Breeds/Nutrition	2
ENG 201	Communications	3
BUS 101	Introduction to Business	3
CHE 101	Chemistry I	3
		18
First Year Totals		36
Semester 3		
VET 201	Pharmacology & Anesthesia	3
VET 202	Clinical Pathology	2
VET 202L	Clinical Pathology Lab	1
VET 204	Clinical Rotation I OR VET 208 Clinical Rotation II	2
VET 205	Surgical Nursing I and Lab	2
VET 206	Microbiology & Immunology	2
VET 206L	Microbiology & Immunology Lab	1
		13

Semester 4		
VET 203	Parasitology	1
VET 203L	Parasitology Lab	1
VET 207	Surgical Nursing II and Lab	2
VET 208	Clinical Rotation II OR VET 204 Clinical Rotation I	2
VET 209*	Veterinary Radiology	1
VET 210	Intensive Care Applications	3
VET 211	Diseases & Zoonoses	3
	Elective	2/3
		15/16
Summer Semester		
VET 212	Internship	4
VET 213	Co-op Educational Experience	4
		19/20
Second Year Totals		32/33
Program Totals		68/69
Minimum Credits to Graduate		68

* Must be taken concurrently with VET 204 offered in Semester 3 & 4.

COURSE DESCRIPTIONS

Architectural Drafting & Design Technology

Course No.	Course Title	Hours	Credits
ADT 111	Introduction to Drafting This course is an introduction to basic drafting. It explores the importance of drafting, the required tools and equipment, and the production of orthographic and isometric drawings.	105	4
ADT 112	Site Plans and Details This course covers drawing site planning, detailing and sectioning of drawings needed for use in site adapting a building. <i>Prerequisite:</i> ADT 111	105	4
ADT 113	Residential Planning This course is instruction on residential drawing. It explains floor plans, elevations and basic structural drawing work. <i>Prerequisite:</i> ADT 111	105	4
ADT 114	Introduction to Computer Assisted Drafting (CAD) This course introduces computers into drafting. It explains basic CAD commands required to produce working drawings. <i>Prerequisite:</i> ADT 111	105	4
ADT 115	Residential Working Drawings This course expands on the procedures for developing architectural residential drawings. It explains interior and exterior finishes and interior space planning and includes creation of related schedules and details. <i>Prerequisite:</i> ADT 114	105	4
ADT 116	Residential Building Systems This course introduces students to the various systems within a residential project. It includes development of electrical, plumbing and heating plans. <i>Prerequisite:</i> ADT 115	105	4
ADT 211	Computer Assisted Drafting (CAD) The course expands computer skills in architectural drafting. It explains the advanced commands required for drawing, editing, and printing of working drawings. <i>Prerequisite:</i> ADT 114	105	4

Course No.	Course Title	Hours	Credits
ADT 212	Commercial Drafting This course explains the drawings and specifications required for a commercial project. It includes site, structural and architectural areas of computer design drawings. <i>Prerequisite:</i> ADT 211	105	4
ADT 213	Codes and Ordinances This course emphasizes the design and preparation of construction drawings with regard to building regulations for the protection of public health, safety, and welfare. It includes standards necessary for computer drafting. <i>Prerequisite:</i> ADT 211	105	4
ADT 214	Specifications I This course emphasizes specifications and their relationship to drawing plans and related details. This course covers specifications for site work, concrete, masonry, metals, wood, plastics, moisture protection and related computer drafting. <i>Prerequisite:</i> ADT 211	105	4
ADT 215	Specifications II This course continues to explore project specifications and their relationships to plans and details. This course covers specifications for doors, windows, finishes, specialties, mechanical, electrical and related computer drafting. <i>Prerequisite:</i> ADT 211	105	4
ADT 216	Applied Architectural Drafting This course is a requirement for students not participating in an internship. It will provide practical on-campus experience in active design and facilities management projects.	120	4
ADT 217	Internship This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (No compensation)	200	4

Course No.	Course Title	Hours	Credits
ADT 218	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (Compensation)	200	4

Automotive Technology

Course No.	Course Title	Hours	Credits
AUT 141	Introduction to Automotive Service Field/ New & Used Vehicle Preparation This course covers information on hand tools, machines, and equipment common to the automotive field, general service procedures, lubricants, reference manuals, and pre-delivery inspection of new and used cars. Operations and jobs are completed on components and complete vehicles to reinforce the information presented.	105	4
AUT 142	Hydraulic Brake Systems This course covers information on hydraulic brake systems: mechanical system principles, major components, disc and drum brakes assembly, master cylinder and wheel cylinder operations, hydraulic lines and hoses, brake switches, bleeding hydraulic brake systems, antilock brake principles and service. <i>Prerequisite:</i> AUT 141	105	4
AUT 143	Steering and Suspension This course covers information on steering and suspension systems, theory and principles, independent suspensions, geometric principles, four-point wheel alignment, factors affecting wheel alignment, tools and equipment used for steering and suspension, troubleshooting of suspension and steering, wheel bearings service, manual steering, power steering systems operation. <i>Prerequisite:</i> AUT 142	105	4
AUT 144	Electrical & Electronic Systems This course covers information on electricity, basic electrical circuits, tool and equipment, batteries, charging systems, starting systems, lighting systems, horn, wipers and washers, cooling fans, instrument circuits, body electrical systems. <i>Prerequisite:</i> AUT 143	105	4
AUT 145	Engine Performance & Emissions This course covers information and practical experience on the operation and approved servicing of emission systems, computerized emission control systems, computerized engine procedures and live vehicles to reinforce the information presented. <i>Prerequisite:</i> AUT 144	105	4

Course No.	Course Title	Hours	Credits
AUT 146	Gasoline Fuel Injection Systems & Computers This course covers information and practical experience on the operation and approved servicing of fuel injection systems, introduction to fuel injection systems, closed-loop theory, closed-loop diagnostics, and basic troubleshooting. This information is conveyed through live vehicle work. <i>Prerequisite:</i> AUT 145	105	4
AUT 241	Engine Overhaul Information and practical experience is provided for engine overhaul procedures. The latest high priority tasks recommended by ASE (Automotive Service Excellence) are taught. This will prepare students to take the Mechanic Certification Test in engine repair. Emphasis is placed on the repair of cylinder heads, valve trains, and engine blocks. <i>Prerequisite:</i> AUT 146	105	4
AUT 242	Diesel Fuel Injection This course covers information and operation of the diesel fuel injection systems. An in-depth study of safety procedures, preventive maintenance, and distinctions between General Motors, Dodge and Ford are stressed. <i>Prerequisite:</i> AUT 241	105	4
AUT 243	Heating & Air Conditioning This course covers information on the operation of heating and air conditioning as applied to today's cars and trucks. New learning experiences in the troubleshooting and servicing of these systems are taught. High priority tasks recommended by ASE (Automotive Service Excellence) are covered. This will prepare students to take the Mechanic Certification Test in heating and air conditioning. <i>Prerequisite:</i> AUT 242	105	4
AUT 244	Automatic Transmissions This course covers the information and practical experience necessary to service automatic transmissions. Systematic troubleshooting procedures, adjustments, and unit overhaul are a part of this program. The latest high priority tasks recommended by ASE (Automotive Service Excellence) are presented. This will prepare students to take the Mechanic Certification Test in Automatic Transmissions. <i>Prerequisite:</i> AUT 243	105	4

Course No.	Course Title	Hours	Credits
AUT 245	Manual Transmissions & Differentials This course covers the theory and service experience on complete power-train systems for front-, rear-, and four-wheel drive vehicles. New learning experiences include inspection, replacement, servicing, and rebuilding of manual transmissions, transaxles, locking hubs and power take-off systems. In addition, servicing, troubleshooting and overhaul for 4-wheel drive differentials and drive differentials and drive shafts will be covered. <i>Prerequisite:</i> AUT 244	105	4
AUT 247	Internship This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (No compensation)	200	4
AUT 248	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (Compensation)	200	4
AUT 249	Automotive Electrical Technology This course covers information directly related to IET 101 – Introduction to Automotive and Diesel Electronics in an industrial application. Practical use of theory and principles will be utilized in order to identify and diagnose different electrical and electronic concerns. <i>Prerequisite:</i> AUT 245	105	4

Biomedical Equipment Technology

Course No.	Course Title	Hours	Credits
EET 101	DC Electricity and Instrumentation This course introduces the student to the theory and operation of basic DC circuits, circuit construction, operation and troubleshooting. The student will also gain practical experience in soldering, digital multi-meter usage, and Ohm's Law applications for testing and troubleshooting electric circuits.	105	4
EET 102	Alternating Current and Passive Devices This course introduces the student to circuitry basic to AC electrical theory. It identifies the fundamental differences between AC and DC energy sources and circuit components. It also introduces oscilloscope usage, AC units, nomenclature and electromagnetism. The course will also cover inductors, transformers, and capacitors and their effects in AC circuits. The concepts of RCL circuits and their use as passive filters will be covered. <i>Prerequisite:</i> EET 101	105	4
EET 103	Semiconductors Principles & Applications I This course provides an introduction to semiconductor theory, the different types of semiconductor components, their symbols, characteristics, and uses. Basic power supplies and amplifiers are covered, concentrating on characteristic waveforms, theory and troubleshooting. Practice is provided regarding diodes, transistors and circuit applications. <i>Prerequisite:</i> EET 102	105	4
EET 104	Semiconductors Principles & Applications II This course continues the study of bipolar transistors by introducing their utilization in large signal amplifiers and coupling techniques. Field effect transistors and subfamilies are then covered. The operational amplifier and its characteristics and configurations are thoroughly covered. Amplifier troubleshooting is included, highlighting methods of determining causes and locating problems. The thyristor family of electronic components is introduced by emphasizing characteristics, circuitry, and methods of troubleshooting. <i>Prerequisite:</i> EET 103	105	4
EET 105	Digital Electronics I This course begins by familiarizing the student with the fundamental gates, numbering systems and simplification techniques used for the implementation of digital circuitry. It continues by discussing different	105	4

Course No.	Course Title	Hours	Credits
	IC specifications and interfacing problems found between different families of digital logic. The later portion of the course studies the different digital codes, seven segment displays and flip-flops with emphasis placed throughout the course on symbology, nomenclature and troubleshooting. Complex programmable logic devices are included throughout this course. <i>Prerequisite:</i> EET 104		
EET 106	Digital Electronics II This course continues the study of digital electronics by introducing counters, registers, arithmetic logic circuits and digital to analog interfacing. It examines the circuitry of each section with emphasis on characteristic waveforms and troubleshooting. Complex programmable logic devices will be used throughout this course as an additional modeling tool. <i>Prerequisite:</i> EET 105	105	4
BET 201	Medical Equipment Standards and Testing The student will be introduced to the requirements and methods of testing medical equipment for conformance with industry standards and manufacturer's specifications. Students will then be introduced to the hierarchy of statutes, regulations, standards including accreditation standards, and hospital policies for medical equipment safety. Students will learn standard practices for electrical safety testing, equipment management and medical ethics as they pertain to the Biomedical Technician. <i>Prerequisite:</i> EET 106	105	4
BET 202	Introduction to Medical Telecommunications & Networking This course introduces the student to information and practice regarding data communications, beginning with an overview of what telecommunications is and including understanding of key terms. The student will then learn the fundamentals of modulation, multiplexing, and basics of cabling and cabling terminations. The student will progress from voice to data and then to wireless data communication, and on to today's digital networking principles and protocols and their implementation in medical information networks. <i>Prerequisite:</i> BET 201	105	4
BET 203	Physiological Monitoring Devices The beginning this course is an explanation of the types of hazards encountered in the hospital environment and the role of the BMET in controlling them. It continues by discussing physiological parameters	105	4

Course No.	Course Title	Hours	Credits
	and the transducers and electrodes used to measure them. The course concludes by examining ECG and pressure monitors, concentrating on the test equipment used in performance verification and troubleshooting. <i>Prerequisite:</i> BET 202		
BET 204	Life Support Systems This course is an overview of the types of medical equipment needed to support patients with life threatening problems. Examples of such equipment are defibrillators, pacemakers, ventilators and hemodialysis units. The function of each type of equipment is discussed. Some pieces of equipment are examined thoroughly in relation to preventive maintenance, parts identification, and description of circuits. <i>Prerequisite:</i> BET 203	105	4
BET 205	Specialized Medical Systems This course describes the different types of specialized treatment and diagnostic imaging equipment found in the hospital environment. Lasers, ultrasound, surgical video and X-ray equipment are examples of the topics covered. The basic theory and function of each piece of equipment is explained with emphasis on patient and personal safety. <i>Prerequisite:</i> BET 204	105	4
BET 207	Internship This experience is designed to expose students to hospital environments and their staff, departments, patients, and equipment. Students are placed into a hospital after meeting all prerequisites and academic requirements. Students are expected to adhere to all hospital policies and regulations during their internship. During the internship, students perform preventive maintenance, safety analysis, and minor repairs on selected pieces of medical equipment. (No compensation) <i>Prerequisite:</i> BET 205	200	4
BET 208	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with their work term facility. Students will work on projects selected to expose the student to “live”	200	4

Course No.	Course Title	Hours	Credits
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work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

Prerequisite: BET 205

Carpentry & Cabinetmaking Technology

Course No.	Course Title	Hours	Credits
CCM 161	Woodworking Tools and Machines I Classroom lecture, demonstrations, and intensive, safe use of hand, portable and stationary tools will introduce the student to the woodworking field. Also covered are the various properties of wood, such as species, types, grain direction and defects. Project planning and calculations are covered in this course as well.	105	4
CCM 162	Woodworking Tools and Machines II The safe operation of portable and stationary woodworking equipment are the core elements of this course. Through demonstration and guided application the student will be introduced to the use of the portable electric saw, the overhead router, the hand router, the band saw, the portable drill, the drill press, plate joiner, the saber saw and the reciprocating saw. <i>Prerequisite:</i> CCM 161	105	4
CCM 163	Kitchen and Bath Design Standards The focus of this course is in the design and types of construction of the various cabinets and counters found in a typical residential structure. It is essential that all woodworkers know the sizes, construction, and standards used in the construction industry. This course develops the skills necessary to read a set of drawings to either construct or install cabinetry. <i>Prerequisite:</i> CCM 162	105	4
CCM 167	Cabinet and Component Construction The focus of this course is the cutting of components and construction of cabinets, faceframes, doors and drawers common to the cabinetmaking industry. The special operations required on specific wood working machinery and the assembly of these cabinets' components is practiced in this course. Hinges, pulls, slides and similar door and drawer hardware are also studied. <i>Prerequisite:</i> CCM 163	105	4
CCM 166	Interior Finishes Interior finishes is the study and practice of the common materials and procedures used for finishing the interior of a building. Students will be exposed to skills in the safe use of equipment and materials common to the construction industry. Students will be required to demonstrate knowledge of different materials and applications in the construction industry. <i>Prerequisite:</i> CCM 162	105	4

Course No.	Course Title	Hours	Credits
CCM 168	Exterior Finishes Exterior finishes is the study and practice of the common materials and procedures used for finishing the exterior of a building. Students will be exposed to skills in the safe use of equipment and materials common to the construction industry. Students will be required to demonstrate knowledge of different materials, applications and estimating procedures of the various resources used in the construction industry. Prerequisite: CCM 162	105	4
CCM 261	Site Preparation and Layout This course covers the factors needed to be considered before the start of a building project. The kind of structure, the use of the structure, soil and climate conditions, methods of construction, and placement of the structure on the lot are examples of subjects studied in this course. Elements of the building codes and zoning laws that apply to site layout procedures are also examined in this course.	105	4
CCM 262	Stairs This is a course designed to teach the student the basics of stair construction. Covered during this course will be the math calculations necessary to design a safe and functional stairway and the methods of layout and construction necessary to install stairs.	105	4
CCM 263	Floor/Wall Framing Principles This course covers the construction terminology, materials, methods and practical lessons in the various types of floor and wall framing principles found in the construction industry today. Student involvement with building codes, construction terminology, materials estimating and proper construction techniques give the student a broad knowledge of modern construction practices.	105	4
CCM 264	Roof Framing Principles I Extensive study and practice in the framing of a common gable roof are the main elements of this course. Construction terminology, safe framing practices to follow when framing a gable roof, application of building codes, solving rafter lengths and cutting and fitting rafters are all considered. Estimating materials and roof coverings concludes this course.	105	4

Course No.	Course Title	Hours	Credits
CCM 265	Roof Framing Principles II This course is designed as a study of and practice in the construction principles of the many different and complicated roof systems found in the construction industry today. Beginning with the hip roof, then the intersecting roof and special roof systems, such as an unequal slope roof system, this course offers the specialized framing skills sought in industry. <i>Prerequisite:</i> CCM 264	105	4
CCM 266	Applied Industrial Practices This course is designed so the student can practice and further enhance the carpentry skills experienced through all previous modules. Emphasis will be placed on the quality of work and the development of a positive work ethic.	105	4
CCM 267	Internship This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (No compensation)	200	4
CCM 268	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (Compensation)	200	4

Computer Information Technology

Course No.	Course Title	Hours	Credits
CIT 151	<p>Computer Architecture</p> <p>This course provides coverage of computer hardware in relation to the system: mechanical implementation, electrical implementation and optical implementation; system capabilities regarding processor function, storage functions, and communications functions; and computer system design factors. Data representation is covered in depth, including integer data, floating point notation, character data, as well as data structures. Processor technology and architecture will be covered, as will system integration and performance through logical and physical I/O; device controllers; I/O processing; data and network communication technologies and networks and distributed systems; network architecture; and OSI network layers.</p>	105	4
CIT 152	<p>Computer OS and Networking</p> <p>This course provides a thorough coverage of MS-DOS, including both beginning and advanced commands, the use of DOS Help, comprehensive coverage of the directory and subdirectory structure, and creation of batch files. This course also covers the evolution of operating systems and utilizing the Windows environment, including coverage of the use of .BAT, .SYS, .INI, .EXE, and .COM files in the operating system environments. An introduction to the fundamentals of computer and networking hardware, covering expansion cards, ports, modems, and various peripheral devices will be provided. Intensive function, service and support information regarding MS-DOS, Windows 2000, Windows XP and Linux will be included.</p>	105	4
CIT 153	<p>Network Principles and Applications</p> <p>This course covers the fundamentals of communications, data transmission hardware and software, LANs, and networks. Technical areas including communications channels, modems, transmission codes, and protocols are studied, as are administrative issues such as planning and designing networks. Also included are physical installation and termination of various networking media including CAT5, telecomm and wireless. Theory of fiber optic is covered as well. <i>Prerequisite:</i> CIT 152</p>	105	4
CIT 154	<p>TCP/IP Configuration</p> <p>This course introduces the basic concepts and prerequisites of network computing. It provides the background information needed to prepare for</p>	105	4

Course No.	Course Title	Hours	Credits
	network management and certification. Students will learn how to install and configure TCP/IP on Linux, Novell and Microsoft networks. Students will also learn how to use common TCP/IP applications, including Telnet and FTP, and how to troubleshoot common TCP/IP related problems. <i>Prerequisite:</i> CIT 153		
CIT 155	LAN Design, Configuration, Administration	105	4
	This course provides hands-on experience demonstrating how an LAN should be designed and configured for optimum reliability and security, as well as the administration of users and groups and their permissions within the network environment.		
CIT 156	LAN Service and Support	105	4
	This course covers the exploration of utilities necessary to maintain and support a network and a comprehensive view of potential areas of network failure. Network troubleshooting and performance monitoring in a Linux environment is covered in depth. <i>Prerequisite:</i> CIT 153		
CIT 251	Networking Systems	105	4
	The course focuses on techniques, strategies, and information related to servicing and supporting an inter-network. Interconnection of multiple operating systems is covered with emphasis placed on the interoperability of systems. <i>Prerequisite:</i> CIT 153		
CIT 252	WAN Principles and Applications	105	4
	Students will explore the factors essential to effective network design. Topics include analysis of network traffic patterns, simulation techniques, network topologies, selection of vendors, and estimation of costs. Students will learn to develop user training programs and how to diagnose and solve unexpected problems. The focus will be on Cisco WAN environments.		
CIT 253	Servers: Selection, Configuration and Support	105	4
	This course presents implementing and supporting of industry standard platforms. The course focuses on techniques, strategies, and information relating to servicing and supporting Microsoft Windows NT, 2000 & 2003 Server, Novell NetWare, and Linux, as well as advanced principles of server design and administration with emphasis on integration of multiple WAN environments through software.		

Course No.	Course Title	Hours	Credits
CIT 254	WAN and Telecommunication Applications This course focuses on experiences with Microsoft Exchange Server, Web Mail Server, Internet Information server, apache Web Servers, and firewall solutions. Students will be given theory and practical applications of integrating various servers to implement a total solution.	105	4
CIT 255	Enterprise Application Technologies This course takes theoretical concepts learned in previous modules and builds upon them. The technical knowledge gained from programming, database applications, and network design will also be put to use for the tasks of this course. Students will use the appropriate systems development methodologies in a team approach and follow the life cycle methodology and/or the information center techniques learned previously to achieve a working solution to a particular systems development problem. Emphasis will be placed on the fundamentals of systems analysis and design applied to real world situations, and the documentation and simulation of those applications in the classroom to create a functional prototype of the student's design. <i>Prerequisite:</i> CIT 251	105	4
CIT 256	Internetworking Applications This course is an application of systems and information gained throughout the program. Students will work in teams to apply knowledge to a practical problem.	105	4
CIT 257	Internship This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation)	200	4

Course No.	Course Title	Hours	Credits
CIT 258	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (Compensation)	200	4

Diesel Truck Technology

Course No.	Course Title	Hours	Credits
DTT 141	Introduction to Truck/Trailer Service Field This course covers information on hand tools, machines and equipment common to the truck field, general service procedures, lubricants, reference manuals, pre-delivery inspection of new and used trucks/trailers, and preventive maintenance procedures.	105	4
DTT 142	Air Brake Systems This course covers information on air brake systems. Mechanical foundation and air supply and service system principles, major components, parking brake systems, brake system diagnostics, service to drum brake assemblies, air lines and hoses, brake switches, antilock brake principles and service are all a part of this course. High priority tasks recommended by ASE (Automotive Service Excellence) are covered. This will prepare students to take the ASE technician certification test in Brakes.	105	4
DTT 143	Steering & Suspension This course covers information on steering and suspension systems, theory and principles, independent suspensions, geometric principles, factors affecting wheel alignment, tools and equipment used for steering and suspension, troubleshooting of suspension and steering, wheel bearings service, manual steering, and power steering systems operation.	105	4
DTT 144	Electrical & Electronic Systems This course covers information on electricity, basic electricity circuits, tools and equipment, batteries, charging systems, starting systems, lighting systems, horn, wiper and washers, cooling fan and instrument circuits, and body electrical system.	105	4
DTT 145	Diesel Fuel Injection Systems This course covers information on the theory and operation of the different types of diesel fuel injection pumps, nozzles and injectors, including current electronic fuel injectors. In-depth study of fuel system preventive maintenance, troubleshooting diagnostics, injection pump timing and installation procedures, and replacement methods for injectors and nozzles are taught.	105	4

Course No.	Course Title	Hours	Credits
DTT 146	Diesel Engine Overhaul Diesel engine principles of operation on four- and two-stroke engines are covered. Component identification, measurement and replacement, along with complete tear down and overhaul procedures are covered in this course. This will prepare students to take the ASE technician certification test in Diesel Engines.	105	4
DTT 241	Diesel Engine Performance and Tune-up Procedures This course covers information and practical experience on the operation and approved servicing, troubleshooting, and tune-up procedures on several different current models of diesel engines.	105	4
DTT 242	Manual Transmission Overhaul This course covers the information and service experience in truck manual transmissions. New learning experiences include inspection, replacement, servicing and rebuilding of manual transmissions and power take-off systems. High priority tasks recommended by ASE are covered.	105	4
DTT 243	Differentials & Drive Line This course covers the information, overhaul, service and troubleshooting of the rear differentials and drive shaft. High priority tasks recommended by ASE are covered.	105	4
DTT 244	Automatic Transmission Diagnostics, Basic Hydraulics This course provides information and practical experience necessary to service automatic transmissions found in many heavy diesel trucks. Systematic troubleshooting procedures are all part of this program to assist the technician in the proper repair procedures, installation, and repair of hydraulic systems.	105	4
DTT 245	Heating, Air Conditioning, Refrigeration This course covers the fundamentals of the heating, air conditioning and refrigeration systems as applied to today's trucks and refrigerated trailers. New learning experiences in the troubleshooting and servicing of these systems are taught. High priority tasks recommended by ASE are covered. This will prepare students to take the technician certification test in Heating, Ventilation, and Air Conditioning.	105	4

Course No.	Course Title	Hours	Credits
DTT 246	Applied Diesel Principles and Applications This course is intended to re-examine and emphasize specific mechanical skills and diagnostic techniques and to apply them to principles and theories learned in previous modules. Students are expected to hone the specific skills to prepare them for entry-level positions upon graduation.	105	4
DTT 247	Internship This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (No compensation)	200	4
DTT 248	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (Compensation)	200	4

Distribution & Supply Logistics Technology

Course No.	Course Title	Hours	Credits
LOG 181	<p>Introduction to Logistics</p> <p>This course introduces the theory and mechanics of materials management from purchase to distribution. It includes attention to materials researching, ordering, transporting, warehousing, inventorying, processing, and distributing.</p>	45	3
LOG 182	<p>Total Quality Management</p> <p>This course focuses on the development of efficient product management from production to customer relations. Various manufacturing processes are evaluated and the importance of employee input is stressed. Products are followed for quality control beyond production to purchase and warranty. <i>Prerequisites:</i> BUS 101, MAT 121</p>	45	3
LOG 183	<p>Transportation Management</p> <p>Past, present, and future trends in product movement to and from the product's origin are reviewed. Time and cost of various transporters and routes are discussed. Government regulation for safe product handling is covered. <i>Prerequisites:</i> LOG 181, BUS 101</p>	45	3
LOG 184	<p>Introduction to Materials Handling</p> <p>The equipment, procedures, and regulations of materials handling are this course's concentration. Efficiency and safety in all stages from acquisition of components to the distribution of finished products are introduced and evaluated.</p>	45	3
MNG 185	<p>Principles of Management</p> <p>This is an introductory study of the fundamental concepts and approaches to the management of employees and production. Traditional and current organizational methods of planning, decision making, and motivating are reviewed. Emphasis is on diversity in the workforce and ethics in the business environment.</p>	45	3
LOG 281	<p>Warehousing and Distribution</p> <p>This course covers all aspects of the supply and distribution chain and management including computer operations, bar codes, resupply, storage, handling, and subcontracting. An overview of the use of industry specific programs is also covered. <i>Prerequisites:</i> LOG 183, LOG 184</p>	45	3

Course No.	Course Title	Hours	Credits
LOG 282	Product and Inventory Control Methods of predicting, organizing, and regulating inventory are explained in this course. Products are followed from materials acquisitions, through fabrication, to storage and shipment. The principles and methods of timely resupply are evaluated. <i>Prerequisites:</i> LOG 183, ECO 101, MNG 185	45	3
ECO 201	Contemporary Issues in Economics This introductory course will familiarize students with the current trends and issues surrounding the field of economics. Changes in global and national trends, with a concentration on the impact these issues have on growth and productivity of global industries, will be examined. <i>Prerequisites:</i> ECO 101, BUS 101	45	3
BSL 201	Business Law This course will be an overview of law as it pertains to the business environment. An introduction to law, legal process, negligence and contracts, among other topics, will be reviewed. <i>Prerequisites:</i> BUS 101, ECO 101, MNG 185	45	3
LOG 284	International Logistics This course examines the policies and procedures used in the global transfer of materials and products. Consideration of cultures, manpower, geography, politics, natural resources, and communication are introduced, and strategic planning is coordinated to meet the requirements of international trade. <i>Prerequisites:</i> LOG 281, LOG 282	45	3
MNG 284	Management and Supervision This course deals with the more complex aspects of management. Because of the needs of today's business world, students will be taught not only how to manage people but also how to manage performance, processes, and relationships. Learning to deal with pressure and constant change will be discussed. <i>Prerequisites:</i> MNG 185, LOG 183, LOG 282	45	3
BUS 101	Introduction to Business This class includes a survey of current business practices with an examination of the topics of management, organization, finance, marketing and personnel function. Particular attention will be paid to examining the current economic environment.	45	3

Course No.	Course Title	Hours	Credits
ACC 101	Accounting I This course will acquaint the student with a realistic approach to the accounting principles that they can be expected to encounter in the business world. It will give them the basic knowledge needed to work in a professional office or start their own business and also to manage their own finances. The course will acquaint the student with computer accounting operations using QuickBooks software.	45	3
LOG 287	Internship This is a planned and supervised off-campus experience in the workplace. It may be paid or unpaid. A selection of acceptable work sites and situations is offered to give students exposure to schedules, pressures, and responsibilities that are encountered in the world of work.	200	4

Electrical Construction & Maintenance Technology

Course No.	Course Title	Hours	Credits
ECM 101	Fundamentals of Electricity This course covers general safety principles, basic construction guidelines, laws governing electricity, basic hand tool usage, print reading, electrical safety, circuit construction and operation. This course will also begin to outline use and interpretation of the National Electrical Code (NEC).	105	4
ECM 102	Introduction to Residential Wiring This course will provide information on conductor ratings, wiring styles, grounding, and practical experience in basic residential electrical wiring. DC circuit theory will be introduced in this course. <i>Prerequisite:</i> ECM 101	105	4
ECM 103	Principles & Applied Practices of Residential Wiring This course is a continuation of basic residential wiring with advanced practical experience in lighting branch circuits and special purpose circuits. DC circuit theory will continued to be discussed in this course. <i>Prerequisite:</i> ECM 102	105	4
ECM 104	Advanced Residential Circuit Installation This course is a continuation of advanced electrical residential wiring. In addition to practical application, examination of skills, troubleshooting, and the maintenance and repair of electrical circuits, the course will cover NEC requirements and installation of residential electrical services. AC circuit theory will be introduced in this course. <i>Prerequisite:</i> ECM 103	105	4
ECM 105	Service Installation & Troubleshooting This course is a continuation of electrical residential wiring. The focus of the practical experience and problem solving skills are in panel board selection, electric service, and overcurrent protection such as fuses and circuit breakers, as well as low voltage lighting and cooling systems. AC circuit theory will continued to be discussed in this course. <i>Prerequisite:</i> ECM 104	105	4

Course No.	Course Title	Hours	Credits
ECM 106	Commercial Wiring This course provides information and practical experience in installation of electrical systems for commercial buildings, reading architectural drawings, and branch circuit feeders and installation, as well as appliance and special systems found in commercial buildings. Students receive practical experience in conduit bending. Three phase circuits and inductive loads will be covered in this course. <i>Prerequisite:</i> ECM 105	105	4
ECM 201	Industrial Motor Control This course will introduce the basic principles and practices of motor control pertaining to magnetism, AC/DC contractors and motor starters, time delay and control devices, motor types and motor theory. <i>Prerequisite:</i> ECM 106	105	4
ECM 202	Advanced Motor Control Circuits This course is a continuation of theory and practice in reversing motor circuits, power distribution systems, solid-state electronic control devices, electro-mechanical relays, reduced voltage and accelerating/decelerating methods. Also covered is an introduction to programmable logic controller (PLC) wiring and programming. <i>Prerequisite:</i> ECM 201	105	4
ECM 203	Programmable Logic Controllers This course will cover PLC wiring and programming. The student will be exposed to motor control/PLC integration and wiring. PLC functions such as timers, counters and sequencers will be explored. <i>Prerequisite:</i> ECM 202	105	4
ECM 204	Industrial Maintenance I This course covers the theory and practice of industrial mechanics including calculations, rigging, lifting, ladders, hydraulics, lubrication, pneumatics, flexible belt drive systems, vibration and alignment. <i>Prerequisite:</i> ECM 203	105	4
ECM 205	Industrial Maintenance II This course covers the service and repair principles and practices for industrial electrical systems, industrial electronic devices, programmable controllers, welding, boilers, HVAC, mechanical and fluid power systems. <i>Prerequisite:</i> ECM 204	105	4

Course No.	Course Title	Hours	Credits
ECM 206	Applied Practice and Special Topics This course provides the opportunity to integrate all theory and practical experiences learned in previous modules. It is intended to be student project based which will prepare students for an entry-level position. In addition, special topics such as high voltage will be introduced to further enhance their problem-solving and practical skills.	105	4
ECM 207	Internship This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (No compensation)	200	4
ECM 208	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (Compensation)	200	4

Electronic Technology

Course No.	Course Title	Hours	Credits
EET 101	DC Electricity and Instrumentation This course introduces the student to the theory and operation of basic DC circuits, circuit construction, operation and troubleshooting. The student will also gain practical experience in soldering, digital multi-meter usage, and Ohm's Law applications for testing and troubleshooting electric circuits.	105	4
EET 102	Alternating Current and Passive Devices This course introduces the student to circuitry basic to AC electrical theory. It identifies the fundamental differences between AC and DC energy sources and circuit components. It also introduces oscilloscope usage, AC units, nomenclature and electromagnetism. The course will also cover inductors, transformers, and capacitors and their effects in AC circuits. The concepts of RCL circuits and their use as passive filters will be covered. <i>Prerequisite:</i> EET 101	105	4
EET 103	Semiconductors Principles & Applications I This course provides an introduction to semiconductor theory, the different types of semiconductor components, their symbols, characteristics, and uses. Basic power supplies and amplifiers are covered, concentrating on characteristic waveforms, theory and troubleshooting. Practice is provided regarding diodes, transistors and circuit applications. <i>Prerequisite:</i> EET 102	105	4
EET 104	Semiconductors Principles & Applications II This course continues the study of bipolar transistors by introducing their utilization in large signal amplifiers and coupling techniques. Field effect transistors and subfamilies are then covered. The operational amplifier and its characteristics and configurations are thoroughly covered. Amplifier troubleshooting is included, highlighting methods of determining causes and locating problems. The thyristor family of electronic components is introduced by emphasizing characteristics, circuitry, and methods of troubleshooting. <i>Prerequisite:</i> EET 103	105	4

Course No.	Course Title	Hours	Credits
EET 105	Digital Electronics I This course begins by familiarizing the student with the fundamental gates, numbering systems and simplification techniques used for the implementation of digital circuitry. It continues by discussing different IC specifications and interfacing problems found between different families of digital logic. The later portion of the course studies the different digital codes, seven segment displays and flip-flops with emphasis placed throughout the course on symbology, nomenclature and troubleshooting. Complex programmable logic devices are included throughout this course. <i>Prerequisite:</i> EET 104	105	4
EET 106	Digital Electronics II This course continues the study of digital electronics by introducing counters, registers, arithmetic logic circuits and digital to analog interfacing. It examines the circuitry of each section with emphasis on characteristic waveforms and troubleshooting. Complex programmable logic devices will be used throughout this course as an additional modeling tool. <i>Prerequisite:</i> EET 105	105	4
EET 201	Communication Electronics I This course begins by familiarizing the student with the fundamental theory, safety, circuits and test equipment used in communications. The course continues to cover modulation techniques, transmitters and receivers. Construction, safety and testing of communication circuits are an integral part of this course. <i>Prerequisite:</i> EET 106	105	4
EET 202	Communication Electronics II This course continues the study of the principles and applications of electronic communication systems beginning with processes of multiplexing and de-multiplexing. The course continues with a study of digital transmission, transmission lines and antennas. The course concludes with an overview of communication systems to include television, optical, satellite and wireless technologies. Safety and troubleshooting are emphasized throughout the course. <i>Prerequisite:</i> EET 201	105	4

Course No.	Course Title	Hours	Credits
EET 203	Industrial Electronics This course begins with a study of industrial solid state and logic devices and compares these devices to the standard devices used for small scale electronics. The course continues with a comparison between digital logic and relay logic. The issues of power control and triggering circuits are examined with the use of power transistors, thyristors and associated circuitry. The course concludes with a study of sensors, transducers, output devices and an introduction to control topologies. Safety and troubleshooting are emphasized throughout the course. <i>Prerequisite:</i> EET 106	105	4
EET 204	Programmable Logic Controllers This course begins with an introduction to programmable logic controllers (PLCs), their uses and configurations. The course continues with an examination of the different types of hardware devices that are used in conjunction with PLCs. This course will cover the programming of PLCs from the simple relay logic functions to advanced functions used in PLCs. An emphasis is placed on programming projects throughout the course. <i>Prerequisite:</i> EET 203	105	4
EET 205	Introduction to Robotics This course begins with a study of the terminology, coordinate systems, and physical makeup of a robotic system. It continues with an examination of the power systems, lifting capacities and applications for robots. The course will conclude with an investigation of sensors, vision systems, artificial intelligence and the principles and techniques involved in working with robotics. <i>Prerequisite:</i> EET 204	105	4
EET 206	Applied Electronics Principles & Applications This course is intended to provide practical electronic projects and procedures to principles and theories learned over the previous modules. Students will be expected to hone their practical skills to better prepare them for an entry-level position upon graduation. Associate theory will be discussed to enhance the student's practical abilities. <i>Prerequisite:</i> EET 205	105	4

Course No.	Course Title	Hours	Credits
EET 207	Internship This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (No compensation) <i>Prerequisite:</i> EET 205	200	4
EET 208	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (Compensation) <i>Prerequisite:</i> EET 205	200	4

Precision Machining Technology

Course No.	Course Title	Hours	Credits
PMT 121	<p>Safety and Tool Usage</p> <p>This course covers Machine Tool theory including safety practices and working concepts of hand tools, band saws, belt sanders, pedestal grinders, drill presses, and cutting tools. It also provides practical applications including jobs and projects involving hand tools, cutting, deburring, sharpening, and grinding various cutting tools.</p>	105	4
PMT 122	<p>Engine Lathe Set-Up and Operation</p> <p>Safety, cutting speeds, types of lathes, lathe accessories, lathe operation, and measuring instruments are covered in this course. Practical application includes jobs and projects using three- (3) and four- (4) jaw chucks, as well as collets. Lathe operations covered include facing, turning, center drilling, reaming, boring, tapering, knurling, and thread chasing. The course provides students with technical competence in using lathe accessories, as well as in lathe operations. Technical competence in the use of measuring instruments is also stressed.</p>	105	4
PMT 123	<p>Milling Machine Set-Up and Operation</p> <p>Information about safety, types of milling machines, milling machine attachments, milling operations, and measuring instruments is contained in this course. Practical applications include jobs and projects that start with basic milling machine set-ups and operations and continue to grow in complexity. Measuring instruments are also stressed in this course.</p>	105	4
PMT 124	<p>Combined Machine Practices</p> <p>Lathe and milling machine operations, as well as measuring tool use, are emphasized in this course. An introduction to metallurgy and heat-treating is also included. Practical applications consist of projects that require milling and turning operations. Projects consist of more than one part requiring machining for desired fit and proper heat-treating. The importance of machining to size is stressed in multiple part projects. Safety is emphasized in milling operations, turning operations, measuring tool use, and heat-treating.</p>	105	4
PMT 125	<p>CNC Lathe Set-Up and Operation</p> <p>This course covers the general information needed to program CNC lathes. Programs written by the student will include straight and taper turning. Programming radii as well as thread chasing, drilling and</p>	105	4

Course No.	Course Title	Hours	Credits
	tapping are also included. Computer Numeric Control (CNC) lathe safety procedures, tooling set-up, programming and CNC lathe operation are included in the practical application portion of this course.		
PMT 126	CNC Milling Set-up & Operation This course covers the general information needed to program CNC milling machines. Programs written by the student will include contours, cutter compensation, and hole patterns. CNC milling safety, tool set-up, programming and CNC milling machine operation are included in the practical application portion of this course.	105	4
PMT 221	Machining Management This covers machine-scheduling estimates, print control and revisions, actual production, assembly, inspection, and final production analysis. This course places students as owners of their own shop in which they will be asked to choose a part, estimate machine times, check or create blueprints, and machine parts. Finally, parts are assembled, inspected, and evaluated for profit or loss.	105	4
PMT 222	Computer Aided Design/ Quality Control This course introduces Computer Aided Design (CAD) software to create geometry for Computer Aided Machining (CAM). Practical application includes a group of exercises created to familiarize the students with CAD key and its functions. Also covered in this course are quality control, inspection, tool use, and calibration. Practical application includes inspecting the work of others and tracking discrepancies between part and print.	105	4
PMT 223	Computer Aided Machining - Applied This course stresses taking geometry from CAD software files and transferring it to CAM software. Practical experience includes creating geometry in Cadkey, creating toolpath to machine part, inputting cutter information, transmitting toolpath to CNC, and machining the part. Part inspection is the final step. Students will receive practical experience in creating geometry, transferring to Mastercam, creating toolpath, transmitting to the CNC machine, and inspecting parts.	105	4

Course No.	Course Title	Hours	Credits
PMT 224	Comprehensive Machining Processes Covered in this course are the more advanced methods of machining including wire and sinker electrical discharge machining, waterjet cutting machines and laser cutting machines. Machining allowances and processes will also be covered. Cutting torch and welding applications will also be a part of this course. The addition of more complex parts and machining processes will be looked at.	105	4
PMT 225	Grinding Set-ups and Operations Types of grinders, safety rules, operations, and tool and cutter grinding are covered in this course. Use of measuring instruments is emphasized. Practical experience includes setting up and operating surface grinders, grinding taper and straight shafts, and grinding end mills. Inspection of parts after grinding is also stressed.	105	4
PMT 226	Applied Machining Practices Practical experience includes designing, machining, and assembling a project. The project tests the student's machining abilities by demanding accuracy and lack of machine marks. Also covered are final touches on polishing skills with conventional machines. Jig Bore safety, set-up, and operations will also be covered in this course. All machines in the shop are at the student's disposal.	105	4
PMT 227	Internship This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation)	200	4
PMT 228	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements	200	4

Course No.	Course Title	Hours	Credits
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prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (Compensation)

Radiologic Technology

Course No.	Course Title	Hours	Credits
RAD 132	Radiologic Positioning I/Lab This course introduces the student to basic terminology used in radiographic positioning. The curriculum provides a comprehensive study of theory and principles of basic positions of the upper and lower extremities, bony thorax, chest, abdomen, gastrointestinal system, biliary tract and urinary system. This course is designed to develop competency through a combination of lecture and laboratory. Further practice will come in the actual clinical setting under the guidance of an assigned clinical instructor.	75	4
RAD 133	Radiologic Exposures & Principles I/Lab This course is an introduction to the fundamental concepts and techniques relating to the production of x-rays. Emphasis is placed on the factors affecting an acceptable radiograph: contrast, density, recorded detail and visibility of detail.	75	4
RAD 134	Introduction to Radiology/Patient Care This course will introduce the student to the field of radiology. It will review today's health care and hospital environment, accrediting bodies, and the professional ethics guiding the health worker today. The profession will be examined to assist students in committing themselves to a career in Radiography. This course also provides a comprehensive study of basic concepts regarding patient care. The student will study proper body mechanics, transfer techniques, medical asepsis, communication skills with patients and co-workers, how to measure vital signs, how to deal with medical emergencies, and isolation techniques.	30	2
PRA 131	Clinical Practicum I Clinical radiography experience applies radiographic theory and provides learning experiences to help the student acquire expertise and proficiency in a variety of diagnostic radiographic procedures at specified levels of competency. Students will work with darkroom applications, display basic radiation protection standards, be familiar with assorted radiographic equipment, and show competency in anatomy, physiology and radiographic positioning. Additionally, students will integrate knowledge of patient care and management and medical ethics	240	1

Course No.	Course Title	Hours	Credits
	into daily radiographic practice. Students will spend a minimum of 16 per week hours in the clinical environment. Students must have verification of current CPR certification, annual health examination, and immunizations. <i>Prerequisites:</i> RAD 132, RAD 133, RAD 134, HAP 101		
RAD 135	Radiologic Positioning II/Lab This course is a continuation of RAD 132. The course is designed to develop competency in diagnostic procedures of the vertebral column and cranium. Competence will be demonstrated on a weekly basis in a laboratory setting. Further practice will come in the actual clinical setting under the guidance of an assigned clinical radiographer. <i>Prerequisites:</i> RAD 132, RAD 133, RAD 134, HAP 101	75	4
RAD 136	Radiologic Exposures & Principles II/Lab A continuation of RAD 133, this course is designed to acquaint students with the comprehensive analysis of the factors affecting image quality requiring integration of all exposure and technical factors previously learned. The student will also become familiar with film processing. <i>Prerequisites:</i> RAD 131, RAD 132, RAD 133, RAD 134, HAP 101	75	4
RAD 137	Radiologic Nursing Procedures This course is a continuation of patient care techniques. It progresses into theory and advanced application of the clinical concepts of patient care and medical techniques in the radiology department. The student will become familiar with venipuncture, contrast media use and interactions, history taking and basic pharmacology. <i>Prerequisites:</i> RAD 132, RAD 133, RAD 134	15	1
RAD 138	Radiation Biology & Protection This course describes the effects of ionizing radiation on cells in the human body. Special emphasis is placed on how the effects of x-ray radiation affect biological tissue. Radiation protection and monitoring concepts will be reviewed. <i>Prerequisites:</i> RAD 132, RAD 133, RAD 134, HAP 102	45	3
PRA 132	Clinical Practicum II Clinical radiography experience applies radiographic theory and provides learning experiences to help the student acquire expertise and proficiency in a variety of diagnostic radiographic procedures at specified levels of competency. Students will work with darkroom applications, display	480	2

Course No.	Course Title	Hours	Credits
	basic radiation protection standards, become familiar with various radiographic equipment, and show competency in anatomy and physiology as well as radiographic positioning. Additionally, students will integrate knowledge of patient care and management and medical ethics into daily radiographic practice. Students will spend a minimum of 40 hours in the clinical environment per week. Students must have verification of current CPR certification, annual health examination, and immunizations. <i>Prerequisites:</i> PRA 131, HAP 102		
PRA 231	Clinical Practicum III The clinical radiography experience applies radiographic theory and provides learning experiences to help the student acquire expertise and proficiency in a variety of diagnostic radiographic procedures at specified levels of competency. Students will work on various radiographic equipment, and show competency in anatomy and physiology and radiographic positioning. Additionally, students will integrate knowledge of patient care and management and medical ethics into daily radiographic practice. Students will spend a minimum of 16 hours per week in the clinical environment. Students must have verification of current CPR certification, annual health examination, and immunizations. <i>Prerequisite:</i> PRA 132	240	1
RAD 231	Radiologic Pathology This course emphasizes human pathology on a gross anatomic level. Inflammatory, immunology, infections, traumatic and neoplastic processes will be emphasized. Specific diseases will be studied in further depth from an organ system approach. <i>Prerequisites:</i> RAD 135, RAD 136, RAD 137, RAD 138, HAP 102	30	2
RAD 232	Quality Management in Radiography/Lab This course provides the student with a thorough understanding of quality management in a radiology department. Through a lecture and lab course, the student will become familiar with the various testing performed in a radiology department to ensure radiographic image quality. This course will emphasize the quality control and quality assurance topics as they relate to the field of Radiology. All methods will be covered in this course. <i>Prerequisites:</i> RAD 135, RAD 136, RAD 137, PRA 132	45	2

Course No.	Course Title	Hours	Credits
RAD 233	Image Analysis This course is designed to provide students with a basis for analyzing radiographic images for diagnostic purposes. Students will become acquainted with the importance of minimum imaging standards, problem solving technique for image evaluation and the factors that can affect the image quality. Students will be responsible for looking at radiographs to decide whether they are diagnostically acceptable and what they would do to make it a better radiograph. <i>Prerequisites:</i> RAD 138, RAD 231, RAD 232, PHY 201	30	2
PRA 232	Clinical Practicum IV The clinical radiography experience applies radiographic theory and provides learning experiences to help the student acquire expertise and proficiency in a variety of diagnostic radiographic procedures at specified levels of competency. Students will work on various radiographic equipment, and show competency in anatomy and physiology and radiographic positioning. Additionally, students will integrate knowledge of patient care, management and medical ethics into daily radiographic practice. Students will spend a minimum of 24 hours per week in the clinical environment. Students must have verification of current CPR certification, annual health examination, and immunizations. <i>Prerequisite:</i> PRA 231	360	1
RAD 236	Advanced Medical Imaging This course familiarizes the student with the different modalities within the field of radiology. The students will explore topics in specialized areas such as CT, MRI, Nuclear Medicine, Mammography, PET, Bone Densitometry, US, and Radiation Oncology. The students will review computer applications, digital imaging, trauma radiology, venograms, myelograms, arthrograms and pediatric imaging. <i>Prerequisites:</i> RAD 138, RAD 231, RAD 232, PHY 201	30	2
RAD 237	Registry Seminar This course is established to assist the student in preparing for the registry examination given by the American Registry of Radiologic Technologists (ARRT). <i>Prerequisite:</i> PRA 231	30	2

Veterinary Technology

Course No.	Course Title	Hours	Credits
VET 101	Introduction to Veterinary Technology/ Clinical Management	30	2
	<p>This course focuses on the duties and responsibilities of veterinary technicians as well as job opportunities in the field of veterinary technology. The human-animal bond and ethical issues are introduced to the student. This course provides students with the basic understanding of operations in a clinical setting in addition to office and managerial duties of technicians such as scheduling, ordering, inventory control, teamwork dynamics, and compassion fatigue. Students are required to attend an OSHA training in order to complete clinical assignments (a certificate will be granted upon completion). Students will be required to participate in activities of the Johnson College Animal Care Center to gain hands on experience to enhance the course material.</p>		
VET 102	Clinical Applications for Large Animals	15	1
	<p>This course introduces students to large animals (horses, cows, goats, sheep, and pigs). Students will learn about restraint and handling of large animals with an emphasis on safety. Material covered will include basic nursing care (medicating, physical exams, sample collection, as well as other routine procedures). Students will familiarize themselves with the large animal setting (farms/barns) in addition to various tools and techniques found in large animal medicine.</p>		
VET 102L	Clinical Applications for Large Animals Lab	60	2
	<p>This lab class provides students with hands-on experience with various species. Animals will vary with availability. Students are strongly recommended to obtain a rabies inoculation. Tetanus inoculation is required and documentation must be provided.</p>		
VET 103	Clinical Applications for Small Animals	30	2
	<p>This course provides information on skills needed to work in a clinical setting. Emphasis will be on safety, handling and restraint techniques, general patient care and assessment, and medicating small animals. The course will also concentrate on rabbits, rats, mice and guinea pigs.</p>		
VET 103L	Clinical Applications for Small Animals Lab	30	1
	<p>This lab class provides students with hands-on experience with various species. Animals will vary with availability. Students must provide proof</p>		

Course No.	Course Title	Hours	Credits
	of pre-exposure for the rabies inoculation and tetanus in order to participate in the lab.		
VET 104	Animal Anatomy and Physiology I This course places an emphasis on cellular anatomy and morphology, principles of histology, and microscopic anatomy of tissues. Genetics and cellular reproduction, the nervous system and muscles are included in this course. Proper terminology is utilized to describe the major organs of each system, their location and functions.	45	3
VET 104L	Animal Anatomy and Physiology Lab I This lab course emphasizes the proper use of microscopes as well as safety in the lab. Topics will include cell morphology and histology; the nervous system will also be covered.	30	1
VET 105	Animal Anatomy and Physiology II This course is a study of the anatomical and physiological systems of animals, noting specific differences between species and emphasizing clinical use. Proper terminology is utilized to describe the major organs of each system, as well as their locations, and functions. This course covers the following systems: skeletal, integument, special senses, cardiac, respiratory, immune, alimentary, endocrine, urinary, and reproductive as well as basic avian anatomy and physiology. <i>Prerequisites:</i> VET 104	45	3
VET 105L	Animal Anatomy and Physiology Lab II This lab course emphasizes anatomical study through the dissection of the cat. To help students understand species variation, other organs will be used in the lab. <i>Prerequisites:</i> VET 104L	30	1
VET 106	Animal Husbandry/Breeds/Nutrition This course introduces students to the basic care and management of common companion and farm animals. Various breeds of each species are highlighted as well as basic nutritional requirements. Breeds covered will include reptiles and avian species. Students will be required to participate in activities of the Johnson College Animal Care Center to gain hands-on experience that enhances the course material.	30	2

Course No.	Course Title	Hours	Credits
VET 201	Pharmacology & Anesthesia This course is the study of the theory and application of pharmacology. Classifications of drugs and their usage, with specific information on mechanism of action, side effects, and dosing will be discussed. Students will be exposed to drug calculations and be expected to prepare and administer medications. This course covers dispensing medication and client instruction on how to give medications as well as educate clients on adverse reactions to medications. <i>Prerequisites:</i> VET 102, VET 102L, VET 103, VET 103L, VET 104, VET 104L, VET 105, VET 105L	45	3
VET 202	Clinical Pathology This course is designed to familiarize the student with diagnostic laboratory procedures commonly performed in the veterinary field. Discussion includes clinical chemistry, veterinary hematology, urology and cytology. In addition, sample collection and handling is covered along with instrumentation and equipment maintenance. <i>Prerequisites:</i> VET 101, VET 104, VET 104L, VET 105, VET 105L, CHE 101	30	2
VET 202L	Clinical Pathology Lab This lab is designed to enhance and reinforce lecture and/or demonstrations by allowing students the opportunity to practice a variety of laboratory tests common to veterinary medicine. Students will perform hematological analyses, clinical chemistries, and urinalysis in addition to ear and skin cytology. <i>Prerequisites:</i> VET 101, VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L, CHE 101	30	1
VET 203	Parasitology This course is the study of common internal and external parasites found in domestic and food animals. The characteristics, methods of transmission, life cycle and clinical signs commonly seen in animals will be studied including a review of safety concerns when dealing with these samples. <i>Prerequisites:</i> VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L, VET 106	15	1
VET 203L	Parasitology Lab This course allows students to practice sample collection, preparation and evaluation of samples for parasitologic examination. Laboratory sessions will include techniques for identifying intestinal, blood and external parasites. <i>Prerequisite:</i> VET 101	30	1

Course No.	Course Title	Hours	Credits
VET 204	Clinical Rotation I Each student will be assigned to specific areas within the Johnson College Animal Care Center. Areas will include radiology, lab, kennel, reception, pharmacy, and examination rooms, as well as other areas within the facility. Students will work alongside a licensed technician to hone skills learned in lecture and in labs. <i>Prerequisite:</i> Students must have successfully completed all first year courses before clinical rotations can be taken.	90	2
VET 205	Surgical Nursing I and Lab This course focuses on anesthesia principles and practices and standard surgical procedures. This course covers the role of a surgical technician in regards to preoperative procedures, prepping, scrubbing, assisting, and post-operative procedures, as well as client education/communication. Dental procedures will be the main focus of this course. This course will include 15 hours of lecture and 30 hours of lab. <i>Prerequisites:</i> VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L, VET 106	45	2
VET 206	Microbiology & Immunology This course is a study of the history, classification and nomenclature of bacteria, fungi and viruses. The course will include discussions on sample collection and handling in addition to laboratory procedures in bacteriology, mycology virology and immunology. <i>Prerequisites:</i> VET 102, VET 102L, VET 104, VET 104L, VET 105, VET 105L, CHE 101	30	2
VET 206L	Microbiology & Immunology Lab This course involves identifying bacteria common to veterinary medicine. Students perform biochemical and other tests involved in identifying microorganisms. Sample collection, handling and preparation are stressed as well as the precautions taken when working with samples. Students perform common laboratory tests used to identify viral diseases. <i>Prerequisites:</i> VET 102, VET 102L, VET 104, VET 104L, VET 105, VET 105L, CHE 101	30	1
VET 207	Surgical Nursing II and Lab This course focuses on surgical procedures such as spays and neuters as well as other common surgeries of both small and large animals. The course places special emphasis on pain management, wound management, physical therapy and other nursing care duties and	45	2

Course No.	Course Title	Hours	Credits
	responsibilities of technicians. This course includes 30 hours of lecture and 15 hours of lab. <i>Prerequisite:</i> VET 205		
VET 208	Clinical Rotation II Each student will be assigned to specific areas within the Animal Care Center. Areas will include radiology, treatment, lab, kennel, surgery, reception, pharmacy, and examination rooms, as well as other areas within the facility. Students will work alongside a licensed technician to hone skills learned in lecture and in labs. <i>Prerequisite:</i> Students must have successfully completed all first year courses before clinical rotations can be taken.	90	2
VET 209	Veterinary Radiology This course is a study of radiological procedures for domestic animals common to veterinary medicine. It includes an overview of radiographic properties and equipment, restraint and positioning techniques, as well as exposing, developing and assessing radiographs. Record keeping and safety issues are discussed in addition to specialized radiographic studies. Students are provided hands-on opportunity to practice the techniques learned in class. <i>Prerequisites:</i> VET 101, VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L	15	1
VET 210	Intensive Care Applications This course is a study of the technician's role in emergency and intensive care. Students will study fluid therapy, blood transfusion, CPR, ECG and other procedures associated with emergency and critical care protocols. This course consists of 30 hours of lecture and 15 hours of exposure to emergencies in an emergency facility. <i>Prerequisites:</i> VET 101, VET 105, VET 105L, VET 205	45	3
VET 211	Diseases and Zoonoses This course is the study of diseases affecting domestic animals. Necropsy and sample submission are discussed. Students are introduced to websites such as the Centers for Disease Control (CDC). Etiology, clinical signs, diagnoses, prevention, treatments and public health issues are discussed. A study of vaccination protocols for each species is also included. <i>Prerequisites:</i> VET 101, VET 105, VET 105L, VET 201, VET 203, VET 203L, VET 206, VET 206L	45	3

Course No.	Course Title	Hours	Credits
VET 212	Internship This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (No compensation)	200	4
VET 213	Cooperative Educational Experience This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to “live” work situations, while building upon the student’s knowledge, skill and attitude as an entry-level technician and will be used to grade the student’s performance for the course. (Compensation)	200	4

General Education Courses

Business

Course No.	Course Title	Hours	Credits
ACC 101	Accounting I This introductory course covers the basic principles of accounting: the accounting equation, the accounting cycle, the trial balance, accounting worksheet, adjusting and closing entries and the preparation of basic financial statements will be covered. An emphasis will be placed on learning the basics of microcomputer accounting.	45	3
BSL 201	Business Law This course is an overview of the law as it pertains to the business environment. An introduction to law, legal process, negligence and	45	3

contracts, among other topics, will be reviewed. *Prerequisites:* BUS 101, ECO 101, MNG 185

BUS 101	Introduction to Business	45	3
	This class includes a survey of current business practices with an examination of the topics of management, organization, finance, marketing and personnel function. Particular attention will be paid to examining the current economic environment.		
ECO 101	Introduction to Economics		
	This course covers the basic concepts of economics. Topics include supply and demand, optimizing economic behavior, prices and wages, monetary system, interest rates, banking system, unemployment, inflation, taxes, government spending and international trade. Upon completion, students should be able to explain alternative solutions for economic problems faced by private and government sectors.		
ECO 201	Contemporary Issues in Economics	45	3
	This introductory course familiarizes the student with current trends and issues in the fields of economics. Changes in national and international trends, with a concentration on the impact these issues have on growth and productivity of global industries, will be examined. <i>Prerequisites:</i> ECO 101, BUS 101		
ENT 101	Entrepreneurship I	45	3
	This course acquaints the student with a realistic approach to the problems and concerns of starting a small business. An understanding of the economic and social environment within which the small business functions will be developed. The student will be familiarized with the writing of a business plan. <i>Prerequisite:</i> BUS 101		
MNG 185	Principles of Management	45	3
	This is an introductory study of the fundamental concepts and approaches to the management of employees and production. Traditional and current organizational methods of planning, decision making, and motivating are reviewed. Emphasis is on diversity in the workforce and ethics in the business environment.		
MNG 284	Management and Supervision	45	3
	This course deals with the more complex aspects of management. Students will be taught not only how to manage people but also how to manage performance, processes, and relationships. Learning to deal with		

stress and constant change also will be discussed. *Prerequisites:* MNG 185, LOG 183, LOG 282

English

Course No.	Course Title	Hours	Credits
ENG 0100	Basic College Writing This course is designed to help the entering college student prepare for college-level writing. Word choice and mechanics are reviewed. Emphasis is placed on sentence and paragraph structure and development in writings such as article reviews and brief essays.	45	3
ENG 101	English Composition I This course develops writing competency through the students' construction of all types of essays. Additional writing assignments include a course notebook, job resume and cover letter, sentence definitions, summaries, instructions, and technical research paper completed in Modern Language Association (MLA) style. Outlining, mechanics, syntax, and format are stressed in all writing assignments.	45	3
ENG 102	English Composition II Language structure, usage, and rhetorical principles are stressed as a means to developing clear, coherent writing. Individualized written expression is developed through the use of the essay. Students will read a series of essays that will serve as samples for their writings. The writings will consist of essays using narration, description, exposition, and persuasion. A research paper completed in the MLA style is also required. <i>Prerequisite:</i> ENG 101	45	3
ENG 201	Communications This course deals with developing effective communication in today's society. Issues impacting the perception of informational communication such as diversity and collaboration are integrated into presentations and class assignments. <i>Prerequisite:</i> ENG 101	45	3
ENG 202	Fundamentals of Speech This course stresses the importance of oral communication for one's understanding, evaluating, explaining, and altering various occupationally related conditions. The study of discussions and conferences is the starting point in which students are introduced to	45	3

group oral communication. The remaining course content includes theory and practice in the organization, preparation, delivery, and evaluation of extemporaneous presentations as used in interpersonal, small group, and public speaking situations.

Mathematics

Course No.	Course Title	Hours	Credits
MAT 0100	College Prep Algebra This course covers arithmetic with the real number system, an introduction to the metric system, perimeter, area and volume, polynomial and rational expressions and their simplification, linear equations and formulas, ratio, percent and proportion. <i>Prerequisite:</i> One year of high school Algebra.	45	3
MAT 101	College Algebra I This course covers linear equations, linear inequalities, algebraic expressions and their simplification, an introduction to geometry, right triangle trigonometry, and radicals.	45	3
MAT 121	Introduction to Statistics This course is intended to introduce students to the basic concepts of data collection, data analysis and statistical inference. Topics include an overview of observational and experimental study designs, graphical and numerical descriptive statistics, probability distributions for simple experiments and random variables, sampling distributions, confidence intervals and hypothesis testing for the mean and proportion in the one sample case. The emphasis is on developing statistical reasoning skills and concepts.	45	3
MAT 201	College Algebra II and Trigonometry This course covers the solution of systems of equations, quadratic equations, equations of higher degree, and oblique triangles, along with a discussion of vectors, radian measure and the trigonometric functions of any angle. <i>Prerequisite:</i> MAT 101	45	3
MAT 202	Precalculus This course covers exponential, logarithmic, and inverse trigonometric functions, complex numbers, arithmetic and geometric progressions, and	45	3

special topics in analytic geometry. *Prerequisite:* MAT 201 or permission from Department Chair.

Physical Fitness

Course No.	Course Title	Hours	Credits
PED 101	Physical Fitness This class will consist of skills and fitness pertaining to long-life games. The life games consist of volleyball, basketball, badminton, and weight training. The student will learn basic movement through exercises and fitness for better health in the future.	45	2

Reading/Study Skills

Course No.	Course Title	Hours	Credits
RSS 0100	College Reading/Study Skills This course is designed to develop the student's fundamental reading abilities. Through extensive practice, the student learns to read efficiently and critically. Improved vocabulary and increased reading rate of speed are accomplished while the student's ability to comprehend and retain what he/she reads is developed. The study skills portion of the course allows students to develop the academic skills necessary for success in college-level work. The basic study skills of listening, note-taking, and time management are reviewed. Various study formulas and test-taking strategies are discussed and practiced by the students. A discussion of stress management and theories of memory round out the course content to aid the college student.	45	3

Science

Course No.	Course Title	Hours	Credits
CHE 101	Chemistry I This course emphasizes the fundamentals of basic chemistry. Students will be taught the concept of atoms, molecules and compounds; the	45	3

arrangement of atoms within the periodic table; balanced chemical equations; stoichiometry; the ideal gas law and solutions.

HAP 101	Human Anatomy and Physiology I	45	3
	This course is the first semester of a medically-oriented study of the structure and function of the human body. It is designed for students specializing in health-related and science programs. Topics include basic biochemistry; basic genetics; cells; tissues; and the integumentary, skeletal, muscular, endocrine and nervous systems. Successful completion of recent high school biology and chemistry courses is highly recommended.		
HAP 102	Human Anatomy and Physiology II	45	3
	This course is the second semester of a medically-oriented study of the structure and function of the human body. Topics include digestive, cardiovascular, respiratory, lymphatic, immune, urinary, reproductive systems and the inclusion of anatomical topography and transverse anatomy. <i>Prerequisite:</i> HAP 101.		
MCH 201	Statics & Strength of Materials	45	3
	This course is an examination of coplanar force systems, analysis of trusses, axial stress and strain, material properties, centroids, moment of inertia, stresses in beams, beam design, and torsion.		
MTR 100	Medical Terminology	15	1
	This course is a survey of the terminology used routinely in the medical environment. It will begin with a learning of the common root words used in constructing medical terms and integrate commonly used medical acronyms and abbreviations. The information will be presented according to anatomical systems. The student will be responsible for knowing the written and auditory recognition of the terminology reviewed.		
PHA 201	Physiology and Anatomy	45	3
	The structure and functions of the human body as related to biomedical instrumentation are the subject matter covered in this course. Major body systems are discussed, followed by correlations to the physiological variables to be measured and the basic principles of instrumentation that could be used.		

PHY 101	Introductory Physics	45	3
	This course covers the fundamentals of basic physics. Students will understand the concepts of technical measurement, energy, force and vectors, equilibrium and friction, and uniform acceleration.		
PHY 201	Imaging Physics	45	3
	This course is structured to help the student understand the physics of radiology and the equipment used to produce x-rays, the electrical principles of x-ray production, and atomic physics. <i>Prerequisite:</i> PHY 101		
SBS 201	Social/Behavioral Science	45	3
	This course examines the factors that govern the interactions of people, especially in the workplace. The course discusses communications, motivation, implementing change, problem solving, social development, and human organizational/team concepts.		
VAN 101	Small Animal Nutrition	30	2
	This is an introductory course for students accepted in the Veterinary Technology program, providing identification and function of nutrients, understanding pet food labels, and applications for wellness, life stage, and therapeutic nutrition (prescription foods) for dogs and cats. The course will be a synchronous, interactive Internet course with simultaneous audio in the classroom.		

Computers

Course No.	Course Title	Hours	Credits
CPT 101	Microcomputer I	45	3
	This course provides a basic overview of microcomputer fundamentals and applications. It includes a study of word processing using Microsoft Word; spreadsheet applications using Microsoft Excel; and simple databases using Microsoft Access. The student is also exposed to basic computer operations, managing files, and a brief introduction to PowerPoint.		
DAT 201	Database: Principles & Applications	45	3
	This course is designed to introduce the student to database processing by examining basic database models and applying these models to		

managing and creating multi-user database systems. The student will work with Microsoft Access, Microsoft SQL Server and Visual BASIC.

PRG 101	Programming for the Enterprise	45	3
	This introductory programming course is required for Computer Information Technology students. Topics include introductory programming concepts, procedures and functions, object-oriented programming design and implementation, and problem-solving skills. The course focuses on Visual Basic and Hypertext Markup Language (HTML) in a lab environment.		

Electronics

Course No.	Course Title	Hours	Credits
IET 101	Introduction to Automotive and Diesel Electronics	45	3
	This course will provide the student with an understanding of DC electric principles and the different electronic devices seen in modern diesel and automotive vehicles. It will explain instruments and procedures used in testing and measuring these devices.		

Humanities

Course No.	Course Title	Hours	Credits
HMN 101	Introduction to Humanities	45	3
	This course creates an appreciation for cultural values and differences as portrayed in music, painting, architecture, video and literature. When possible, examples that include multiple arts are studied. Diversity is stressed in all examples.		

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Faculty – Technical/Clinical

Architectural Drafting & Design Technology

Department Chairperson

John F. DeAngelis

A.S., Pennsylvania State University
NICET Certified Engineering Technician
(National Institute of Certified Engineering Technicians)
Associate Member American Institute of Architects

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A.S.T., Johnson College
A.S.E. Certified Master Automotive Technician
(Automotive Service Excellence)

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A.A.S., Auburn Community College

Carpentry & Cabinetmaking Technology

Department Chairperson

Joseph Musheno

B.S., Temple University
A.S.T., Johnson College
Licensed General Contractor

Computer Information Technology

Department Chairperson

Joseph J. Polinsky

A.E., Pennsylvania State University
Microsoft Certified Systems Engineer Windows (MCSE)
Certified Cisco Network Associate (CCNA)
Microsoft Certified Data Base Administrator SQL 7.0 (MCDBA)

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Michael K. Novak

A.S.T., Pennsylvania College of Technology
Certified Original Equipment Manufacturers (OEM) Technician

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American Registry of Radiologic Technologists

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Joan M. Bonczek R.T. (R)
A.A.S., College Misericordia
American Registry of Radiologic Technologists

Clinical Instructor

Roxanne M. Caswell, R.T. (R)
A.A.S., Broome County Community College
American Registry of Radiologic Technologists

Technical Generalist Instructor

Matthew P. Sleboda
A.S.T., Johnson College
Certified American Welding Society (AWS) Inspector

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Department Chairperson**

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Ph.D., State University of New York, Buffalo
B.S., Medaille College
A.S., Medaille College

Instructor

Richard J. Burroughs, D.V.M.
D.V.M., New York State College of Veterinary Medicine
at Cornell University

Instructor

Kendra Lapsansky, C.V.T.
B.S., Marywood University
A.S., Johnson College

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Kanwaldeep Sharma, B.V.Sc.A.H.

B.V.Sc.A.H., Punjab Agricultural University

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Veterinary Technician/Teaching Assistant

Nicole Danks, V.T.

A.S., Johnson College

Faculty – General Education

Athletics & Physical Fitness

Instructor

David J. Coassolo

B.S., East Stroudsburg University

Business Management

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Allan R. Cornell

M.B.A., Chadwick University

B.S., Chadwick University

A.B., Pennsylvania State University

Chemistry and Physics

Instructor

Daniel J. Blessner

M.S., Pennsylvania State University

B.S., Pennsylvania State University

English and Reading & Study Skills

Department Chairperson

George J. Hallesky, Ed.D.

Ed.D., Temple University

M.S., Marywood University

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A.A., Keystone College

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Richard R. Mishura

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Daniel J. Blessner

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